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ABSTRACT

A general evaluation model and workshop activities to help law-related education (LRE) project personnel develop and implement evaluation plans for their projects are provided. The model and activities, however, are applicable to other areas of the social studies as well. The first section of the handbook presents a model for evaluating LRE projects, giving an overview of the evaluation process and suggestions for planning and conducting an effective program evaluation. The second, and major, section includes specific activities that can be used to teach the concepts and skills necessary for effective evaluation of LRE programs. Detailed lesson plans are provided on a variety of topics, including how to determine priorities, how to state objectives, how to use Likert scales to evaluate student attitudes, how to use interviews to collect teacher and student data, and how to analyze and report data. An annotated bibliography of general evaluation resources concludes the handbook. Appendices contain sample agendas for evaluation workshops and a list of LRE projects that have developed instrumentation for use in their own evaluations. This list is keyed to the grade level/purposes for which the instrumentation was developed. (RM)

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EVALUATING SOCIAL STUDIES PROGRAMS: FOCUS ON LAW-RELATED EDUCATION

by

G. Dale Greenawald and Douglas P. Superka

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While all of these individuals contributed to the handbook, the authors take full responsibility for whatever limitations or weaknesses remain.

G. Dale Greenawald
Douglas P. Superka

PREFACE

Evaluation is an essential element of every social studies program. Decreased funding levels and increased emphasis on accountability make this observation especially true today.

Yet many educators know little about effective evaluation. They are unaware of the range of evaluation techniques that may be applicable to their programs, and they are unsure of how to use the data they do collect. Educators often find the literature in the field difficult to translate into terms that staff and participants can apply on a day-to-day basis.

In presenting a series of workshops to law-related education project personnel nationwide, the staff of the Law-Related Education Evaluation Technical Assistance Project succeeded in making the transition from the esoteric to the practical. They developed a general evaluation model and workshop activities that are easy for project staff to use (1) to improve their own evaluation designs and use evaluation results to improve their programs and (2) to help project participants, including teachers, develop skills in using a variety of evaluation techniques. While the examples used in the model and activities are drawn from law-related education, both tools are equally applicable to evaluation of other social studies programs.

Thus, this publication will be most directly applicable to those involved in the growing law-related education movement, but it will also be a useful source of materials that can be adapted to other uses. It is with that intent that ERIC/ChESS and SSEC cooperate in the publication of this handbook.

James E. Davis
Associate Director, SSEC and ERIC/ChESS

INTRODUCTION

This handbook was originally designed to be a practical guide to help law-related education (LRE) project personnel develop and implement evaluation plans for their projects, but the principles and guidance provided are equally applicable to other areas of the social studies as well. The first section of the handbook presents a model for evaluating LRE projects. This model provides an overview of the evaluation process and general suggestions for the questions and issues that need to be addressed in planning and conducting an effective program evaluation.

The second section includes specific activities that a project director or other leader can use to teach the concepts and skills necessary for effective evaluation of LRE programs to their staffs and to others involved in LRE activities. While detailed lesson plans are included to facilitate ready use of the activities, they can be adapted, revised, and used according to the leader's particular needs, style, and time schedule. The workshop materials can also be adapted to include examples drawn from other areas of the social studies, thus making them more broadly applicable. Illustrations of how the activities might be used in different workshop formats are presented in Appendix A.

An annotated bibliography concludes the handbook. This bibliography includes a brief list of commercially available resources that might represent a "core" evaluation library. A longer list of applicable resources in the ERIC system is also provided. All the resources listed are general, rather than focusing only upon law-related education. Thus, they will be of interest to educators in all facets of the social studies field. Appendix B contains a list of LRE projects that have developed instrumentation for use in their own evaluations. This list is keyed to the grade level/purposes for which the instrumentation was developed, thus facilitating use of the list to identify sources of instrumentation that may be useful to a project addressing a similar audience/purpose.

A MODEL FOR EVALUATING LRE PROJECTS

This program evaluation model is a pragmatic effort to assist law-related education program personnel in more effectively evaluating their programs. A variety of approaches to evaluation can be taken--qualitative, quantitative, and goal-free to mention a few. The model described here incorporates some aspects from many of these approaches, but it is certainly not the only way to evaluate an educational program. It is, however, a pragmatic approach to evaluation, an approach that will help project personnel conduct evaluations that provide results which can be used to make programmatic improvements as well as to determine program impact. This pragmatic model assumes that the programs to be evaluated are based upon a needs assessment and upon values and policy decisions that are reflected in their goals and objectives. Although these steps have not been included in the model, it is important for projects that are just beginning to conduct a needs assessment, make policy decisions based upon explicit values, relate program goals to the needs statement, and derive specific objectives from important variables identified by the needs assessment.

Figure 1 is a diagram of the model, whose steps are described below.

Identify/Clarify Project Goals

The initial step in evaluating an ongoing LRE program is to identify and clarify the program's goals. Goals are "statements, usually general and abstract, of desired states in human conditions and social environments."* They are general statements that should be closely related to the program rationale. Goals are an expression of the end conditions that the program seeks to achieve; they establish a direction for developing specific objectives that can be measured.

Goals can be divided into two broad categories--programmatic and instructional. Programmatic goals are broad, general statements of what activities and organizational changes the program seeks to initiate.

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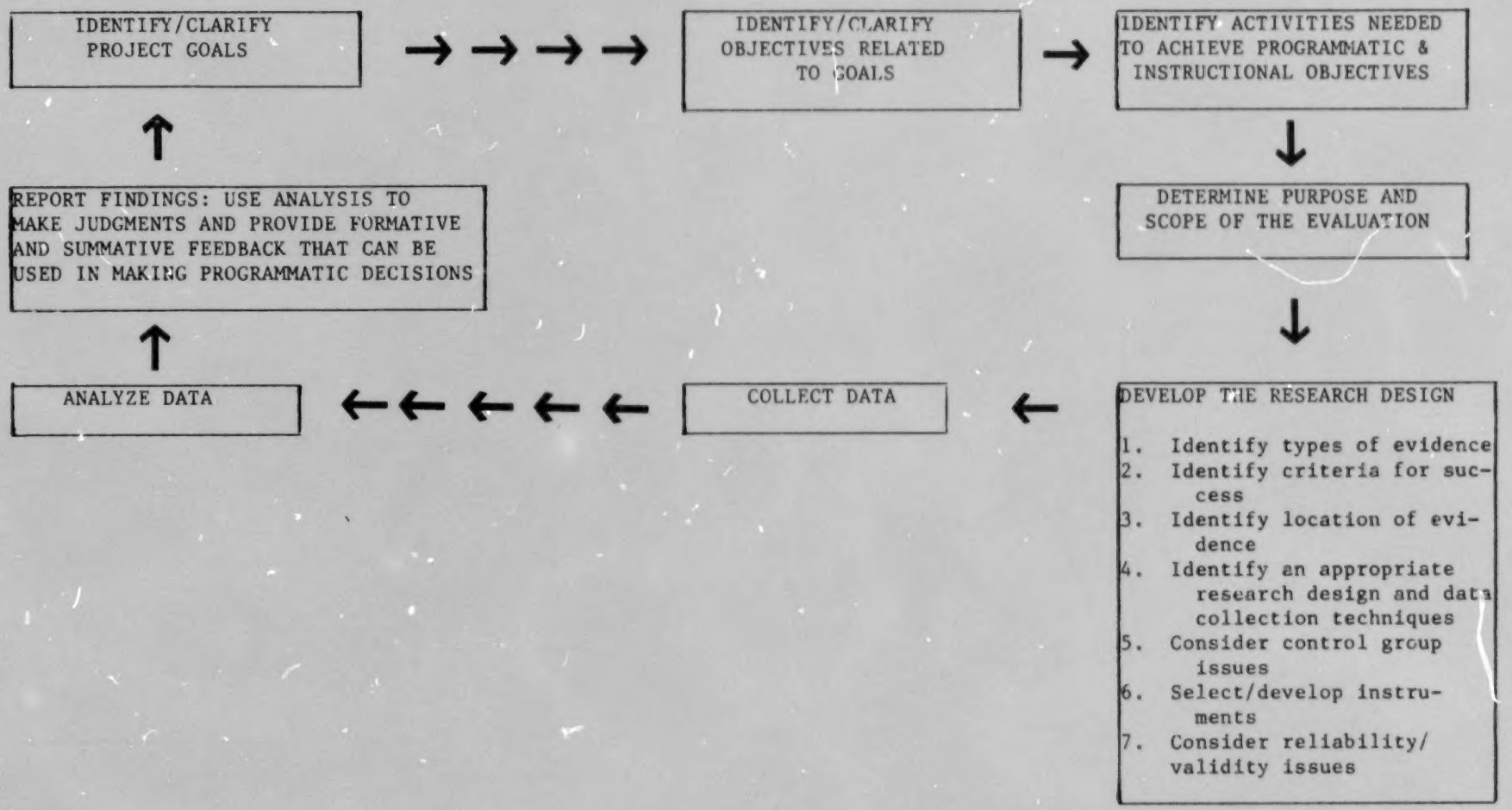
*Peter H. Rossi, Howard E. Freeman, and Sonia R. Wright, Evaluation: A Systematic Approach (Beverly Hills: Sage Publications, 1979), p. 54.

Figure 1

A MODEL FOR EVALUATING EDUCATIONAL PROGRAMS


IDENTIFY/CLARIFY PROJECT GOALS
IDENTIFY/CLARIFY OBJECTIVES RELATED TO GOALS
IDENTIFY ACTIVITIES NEEDED TO ACHIEVE PROGRAMMATIC & INSTRUCTIONAL OBJECTIVES
DETERMINE PURPOSE AND SCOPE OF THE EVALUATION
DEVELOP THE RESEARCH DESIGN
1. Identify types of evidence
2. Identify criteria for success
3. Identify location of evidence
4. Identify an appropriate research design and data collection techniques
5. Consider control group issues
6. Select/develop instruments
7. Consider reliability/validity issues
COLLECT DATA
ANALYZE DATA
REPORT FINDINGS: USE ANALYSIS TO MAKE JUDGMENTS AND PROVIDE FORMATIVE AND SUMMATIVE FEEDBACK THAT CAN BE USED IN MAKING PROGRAMMATIC DECISIONS

They can describe final states of organizations, processes, or activities that will be conducted. Instructional goals describe in broad terms what program participants are to know, feel, or do as a result of their participation. For example, a programmatic goal might be to establish a law-related education component next year in all of the ninth-grade civics classes in the Fall River School District. An instructional goal might be for students in the ninth-grade civics classes to learn about the American legal system.

Identifying and clarifying goals involves several processes. First, it is important to determine that the goals listed in program descriptions are actually the goals pursued by all project staff and that the listed goals have the same meaning for everyone. Often a discussion of these issues reveals that project staff have different interpretations of their program's goals. In this event it is important to establish consensus regarding goals.

A second part of the identification and clarification process is determining whether a goal can be translated into measurable objectives. This requires considering what a goal means in terms of the characteristics of the program or student learning. Measuring achievement of a programmatic goal is generally easier than measuring achievement of an instructional goal. If the evaluator knows what material was presented in ninth-grade civics classes one year, determining whether more law-related issues were addressed the succeeding year would be relatively simple. Measuring learning about the law, on the other hand, requires that someone define exactly what it is about the law that students are to learn. This type of assessment is much more difficult.

Another consideration is the appropriateness of the goals. Are they appropriate given the financial and personnel resources available to the project? Do they seem attainable in light of current research on the topic?

Once goals have been written to be congruent with these considerations, the evaluator is ready to determine which goals are programmatic and which are instructional. This distinction is important; because the two types of goals often require different evaluation techniques, focusing upon each type individually will facilitate the evaluation. The distinction is often fuzzy, however, primarily because programmatic

goals are the stepping-stones through which instructional goals are achieved. This relationship is the source of much of the confusion and ambiguity in classifying goals.

For practical purposes, instructional goals for educational settings can be defined as those goals that can ultimately be measured in terms of impact upon the knowledge, skills, and attitudes of a student group. Any group that is expected to gain in knowledge, skills, or attitudes as a result of some treatment can be called a student group. For example, if teachers are to learn new classroom skills during a workshop, they are the student group with regard to the learning of those skills.

When instructional goals are elaborated as objectives, their achievement can be assessed by measuring changes in student behavior. Programmatic goals, on the other hand, are associated with the activities which indirectly influence students and contribute to changes in knowledge, skills, or attitudes. Programmatic goals are generally evaluated by noting the behavior of program personnel. Many programmatic goals are reduced to objectives that can be measured in two ways--by recording whether an event occurred and by measuring the quality of the processes related to the event.

Identify/Clarify Project Objectives

After separating programmatic from instructional goals, the evaluator must begin to identify and clarify the objectives associated with each goal. Evaluators have defined programmatic and instructional objectives in a variety of ways; the descriptions below indicate how these terms were defined in developing this model. Programmatic objectives refer to successful completion of a series of related activities that are necessary to achieve the broad program goals. These objectives focus upon activities that do not directly involve student learning. For example, recruiting teachers, selecting materials, and budgeting funds would be programmatic objectives associated with the goal of initiating LRE in ninth-grade civics classes throughout the district.

Instructional objectives specify what learners will be able to do after participating in the program that they could not do before. Instructional objectives can be written with varying degrees of speci-

ficity. At the lowest acceptable level, they focus on describing a behavior that will demonstrate that learning has occurred. For example, "Students will be able to describe six roles in a criminal court case" is a loosely written objective. The most specific instructional objectives specify levels and conditions of performance. For example, a very rigorous instructional objective that might be associated with the goal of having students learn about the criminal law system is, "When given a list of six roles in a criminal court case, 85 percent of the students will be able to write a brief description of each role, mentioning 90 percent of the characteristics of each."

Instructional objectives should:

1. Focus upon student learning.
2. Identify an observable behavior that demonstrates learning.
3. Relate directly to a broad instructional goal.
4. Allow flexibility in instructional materials and procedures.
5. Be appropriate for the developmental level of the audience.
6. Be relevant to the needs of the audience.
7. Be categorized as cognitive, affective, or skill objectives.
8. Be realistic. Changes that are not likely to result from participation in the program should not be included as objectives.

Evaluators should review each objective carefully to determine that it meets these criteria. Objectives which do not should be rewritten. Before the objectives are rewritten, the project staff should be involved in precisely defining the objectives. Staff involvement will help to establish consensus about objectives and will provide the evaluator with a comprehensive overview of the project.

Identify Activities Necessary to Achieve Programmatic and Instructional Objectives

After identifying and clarifying objectives, the evaluator and program staff should identify the activities needed to achieve each objective. For programmatic objectives, activities are defined as those actions which must be successfully completed in order to achieve programmatic objectives. These activities generally do not directly involve students. For example, sending training announcements to

principals might be one activity associated with the program objective of recruiting teachers for an LRE training program. Instructional activities are those actions intended to produce changes in the knowledge, skills, or attitudes of students; they do involve students directly. For example, having students participate in a mock trial might be an instructional activity associated with the objective of having students be able to list six roles involved in a criminal court case.

Identification of programmatic and instructional activities is important for several reasons. First, it may help program personnel discover flaws in their program design. Perhaps some necessary steps have been overlooked. Second, it provides the evaluators with a handy checklist for assessing project progress in the area of programmatic objectives. This is especially true if the activities are time-lined. It also provides the evaluators with target activities about which to collect data. The evaluator thus gains some idea about where activities related to various aspects of the program will occur. This knowledge is helpful as the evaluator begins to consider specific kinds of data needed to determine how well the program is meeting its objectives.

Determine Purpose and Scope of Evaluation

Next, the evaluator should meet with project personnel and evaluation sponsors in order to determine the purpose of the evaluation. About what areas are they most concerned? About what topics do they want data? What do they intend to do with the findings? To what audiences will the findings be presented and what will those audiences do with the findings?

It is essential to determine in advance who expects what from the evaluation and what they intend to do with what they learn. This information is useful in a variety of ways. First, it helps the evaluator focus upon the most needed data. For example, school board members may be interested in the effect of LRE upon attendance because many states base their reimbursement rates to districts upon the number of students present per day. If effects on attendance were only a minor project objective and resources for evaluation were scarce, an evaluator might not collect attendance data without advance knowledge that the board was

interested in it. Second, this information is helpful in selecting data collection techniques. Some audiences will only be impressed by "hard" statistical data while others are more interested in the detail and richness provided by qualitative techniques. Identification of audiences and their preferences may influence the types of data collection and analysis procedures adopted.

Third, many evaluators hope to provide information that will be useful to program personnel and assist them in making programmatic decisions. By identifying what program persons want to know and what they intend to do with data, the evaluator can focus the evaluation on areas that will address those needs. Another benefit of identifying audiences and their needs is that this knowledge is useful when selecting appropriate means for presenting findings. A general narrative summary with some anecdotal evidence may be appropriate for community groups, while a sophisticated statistical treatment may be more appropriate for a federal funding agency.

In addition, this phase provides another opportunity to establish congruence between the goals and objectives pursued by program personnel and those evaluated. Determining the purpose and scope of the evaluation will help to assure that the evaluation addresses actual needs and that the results will be used.

This phase of the evaluation should also be used to determine when and how formative feedback will be provided. Formative feedback is information about how well a project is operating that is provided to project personnel periodically during the lifetime of the project. This is opposed to summative feedback, which generally assesses a program's impact at the end of the project. It is important to establish in advance how evaluation findings will be provided to the project staff so that they can use the information to make programmatic decisions.

Developing the Research Design

The initial steps in the evaluation model have had a linear relationship. The next step, however, can be best understood as a collection of issues and questions which must be addressed before conducting the evaluation. In many instances these issues and questions are interrelated, and an answer to one may make answers to others obvious. The

issues and questions do not need to be addressed in order, but a response to each should be developed by the conclusion of this step. During this phase, the evaluator should consider the following seven issues:

1. What types of evidence might be used to determine if an objective has been achieved? An essential step in the development of a research design is the identification of what types of information are needed to assess the achievement of objectives. If the objectives have been written rigorously, specifying behaviors, conditions for measurements, and criteria for success, this question does not need to be addressed again. However, if the project staff has written looser objectives, the evaluator must consider what evidence would indicate that an objective has been achieved. For example, student responses to a request to describe six roles in a criminal court case would be evidence that would suggest the degree to which an instructional objective had been achieved. The presence of teachers at a training meeting might be evidence to indicate achievement of a programmatic objective.

Identifying types of evidence that would be useful in determining how well objectives have been achieved provides an evaluator with a target for data collection efforts. Knowing what types of evidence are needed helps the evaluator determine what kinds of data should be collected. Often, a variety of types of evidence can be identified for each objective. Ideally, information about all of these types of evidence would be collected. If data from several sources is collected by using different collection techniques, triangulation can be used. Triangulation is the process of comparing data from different sources but relating to the same topics. If the data from different sources are congruent, stronger conclusions can be drawn than if the data were derived from only one source.

Realistically, however, financial and time limitations often make collection of data from multiple sources impossible. The evaluator must choose from the various types of evidence identified those which will provide the best evidence while being capable of being collected within the project's financial and time constraints.

In considering the kinds of evidence to be used, the evaluator must recognize that there are different levels of evidence. For example, if

an evaluator wants to determine if students know how to file a claim in small claims court, a very direct assessment would be to ask students to file claims and observe what they do. A less direct way would be for the evaluator to ask students to indicate how much they know about filing a claim. The least direct way might be to ask a teacher how much the students know. Generally, the more direct the level of evidence, the better data it will provide.

2. What are the criteria for success for each type of evidence identified? It is important for instructional and programmatic objectives that involve a quality assessment to include criteria for success. For example, if an instructional objective is to have students describe six roles in a criminal court trial, the number of correct responses that constitutes success must be identified. Must all students describe all six roles in order for the objective to be achieved? Has the objective been achieved if 75 percent of the students correctly describe five roles? Similarly, if 60 percent of participating teachers indicate that they are using new techniques in their classrooms, has a programmatic objective been achieved? These questions can only be answered after the evaluator determines precise criteria for measuring successful achievement of objectives in light of each type of evidence identified as being related to each objective. Criteria can be reasonably developed in two ways. First, a review of the relevant literature will indicate what has been achieved previously and suggest appropriate expectations for the objective being considered. However, if relevant research data are scant or unavailable, discussing appropriate criteria for success with persons knowledgeable about the target population will be the more feasible approach.

3. Where can the desired evidence most likely be found? This step simply involves determining where one could find the type of evidence identified previously. For example, program files would be a likely location for copies of the roster of teachers attending an LRE training program. Supporting evidence in the form of workshop evaluations, budgets, and an agenda might also be found there. Sources of information about changes in teachers' classroom behavior might include the teacher, students, other teachers, and supervisory personnel. By identifying sources of evidence, the evaluator adds more structure to

the evaluation effort. The evaluator can then identify sites that will require permission before data can be gathered, and the process of securing necessary permissions can begin. The evaluator can also group by source the kinds of evidence needed. This grouping may be helpful if the evaluator wants to collect all of the information from one source at one time. Identifying sources of evidence thus assists the evaluator in managing the evaluation process.

4. What type of research design is most appropriate and what are the most appropriate methods for collecting evidence? A variety of factors should be considered before these questions are answered. At the very least, the evaluator should review the purposes of the evaluation and the audiences that will be receiving evaluation data. In instances where having a great deal of information about program processes at a limited number of sites is desirable, a qualitative case study design may be most appropriate. Case study designs attempt to provide a holistic description of a site. They seek to describe a setting or organization as the "natives" see it. Description of patterns and regularities provides the basis for making conclusions and judgments.

In instances where concern focuses upon program impact, a quantitative scientific or quasi-scientific research design may be best. Such designs attempt to determine how a small number of independent variables influence a small number of dependent variables. This approach tries to determine how a specific treatment influences a target group by comparing a small number of variables in the target group to the same variables in a similar group.

For most evaluations, a blend of quantitative and qualitative techniques is appropriate. Although both techniques can be used in both summative and formative evaluations, quantitative techniques are more commonly used to measure impact upon narrow and precisely defined variables while qualitative methods are most commonly used when it is difficult to isolate variables or when the evaluation is primarily concerned with processes. Qualitative methods include such techniques as open-ended interviews, open-ended questionnaires, observational records, collected field documents, and logs written by participants. Quantitative techniques are those approaches which seek to assign numerical values to the data assembled. This approach uses techniques such as

forced-choice questionnaires, structured observations, checklists, structured interviews, and formal tests. Data in these forms can be converted into numerical form, permitting simple but useful statistical treatments as well as more sophisticated treatments involving computers.

One critical concern in selecting a research design and data collection strategies is cost. Generally, assembling good qualitative data requires extensive investment in person-hours, which is costly. On the other hand, qualitative data is often the most useful in making programmatic decisions and adjustments. Quantitative data may be processed by hand, but more sophisticated treatments may require a considerable computer budget. The evaluator must therefore consider how to allocate evaluation resources in order to gather the most useful data.

5. Should control groups be used and if so, what kind? The issues of whether or not to use a control group and if so, how to select it, can be rather complicated. Ideally, a control group is a group that is identical to the experimental group in all respects except for the variable or characteristic being tested. Comparing the results obtained for the experimental group with those of the control group increases the evaluator's confidence in any conclusion that changes in the experimental group were due to the special treatment of them and not to some other variable. In other words, the ideal control group would tell the evaluator what happens if the experimental treatment is not used.

The ideal is, of course, difficult or impossible to achieve in reality. An example can illustrate some of the problems. Suppose you are evaluating the effects on student knowledge of a new LRE curriculum in an American government class. Your experimental class is the class receiving instruction in this new material. You give the students a test of their knowledge of the material at the end of the semester and find that they score 80 percent correct on the average. What should you use as the control group?

You could pick another class in American government that is not receiving instruction in the new LRE curriculum. But is this control class really identical to the experimental class in all respects except the experimental treatment? Are their intelligence and motivation levels identical? Can you be sure they are not learning the material in another form? Is their initial knowledge level of the material identical to the

experimental class? Are they as homogeneous a group as the experimental group?

To the extent that you don't know whether the experimental and control groups are identical, it will be difficult or even impossible to interpret your results. In the above example, in which the experimental group scored 80 percent, how would you interpret the results if the control group scored 85 percent? Does this mean the new LRE curriculum was not effective? Not necessarily. Perhaps the control group was more intelligent or generally more knowledgeable. Perhaps a few individuals had some unusual experiences which brought the class average up. In short, if the experimental and control groups are not absolutely identical (which they never can be), problems in interpreting the results may arise. (Note that the same problems of interpretation would occur whether the experimental group scores higher or lower than the controls.)

In practice, the trick is to try to identify the major variables that could make a difference, and lock for a control group as similar as possible on these variables. Sometimes, advanced statistical techniques can be used to factor out known differences; this is a job for an expert statistician. Also, the evaluator must make sure there is no inadvertent treatment of the control group that could confound the results.

One of the most frequently used methods is to use the same students as their own control--usually by administering a pretest as well as a posttest. There are pitfalls here, too, however. For example, simply taking a test twice can result in improved scores the second time. Or, unexpected or unknown events occurring between the pre- and posttests can affect the posttest scores. Or some special situation, unknown to the evaluator, may have affected performance on either test--perhaps the pretest was given late in the afternoon and the posttest early in the morning.

The above discussion is not meant to discourage the use of control groups, but rather to point out the complexities inherent in their use and to encourage the evaluator to think through the implications of any particular control group selection in interpreting the results.

6. <u>What instruments are available for collecting evidence or what instruments must be constructed</u>? Two common mistakes occur in addressing this issue: to completely adopt existing instruments developed for

similar programs or to immediately begin to write items and develop instruments. Both of these practices should be avoided. Using an existing evaluation instrument without modification is fraught with dangers. Often an instrument designed for use with one project will give very poor results when used with another project because the instrument addresses the specific objectives of the first project and is not appropriate for any project with different objectives. However, individual items from existing instruments may be useful in assessing achievement of objectives for other programs. This approach may be particularly advisable if there are national norms for the existing items and the testing populations are similar.

It is equally mistaken to immediately start developing instruments without surveying the field to determine what is available. Although it is unlikely that existing instruments will be totally satisfactory without modification, it is possible that existing instruments can be adapted or individual items selected from them, thus saving time and perhaps providing items with established reliability and validity.

Thus, the evaluator should begin the process of instrument construction by reviewing what is available and assessing its applicability in light of project objectives. Items that can be used without change or with modifications should be adopted. The evaluator should then develop items to assess achievement of objectives for which no existing items were found. The project staff should critique the items in order to establish that they address project objectives and are appropriate for the target audience. Instruments should also be field tested. The evaluator should enter the field test with specific questions in mind. Some of the more commonly asked questions are: How long does it take to administer this instrument? Is the instrument appropriate to the target audience? Is the instrument reliable? Is it valid?

7. <u>What levels of reliability and validity are acceptable</u>? Reliability is the degree to which an instrument produces identical results when administered under identical conditions. Without a reliable instrument, comparing tests administered to similar groups at different times is difficult. Validity refers to the degree to which an instrument actually measures what it purports to measure. Obviously, if an instrument does not do this, it cannot provide an accurate assessment of achievement of program objectives.

High degrees of reliability and validity are clearly desirable. The more reliable and valid instruments are, the greater the amount of confidence one can have in conclusions based upon analysis of data gathered with them. Often an evaluation section within a school district or a graduate university class can help to determine test and item reliability and validity.

Collect Data

After considering the questions and issues related to developing the research design, the evaluator should collect and organize data. The data collection effort should be carefully monitored using a time line. The evaluator, in cooperation with program staff, should determine when data about each indicator will be collected. This information should be charted and used to guide the evaluation schedule. Data collected should be listed on the chart. This process will allow the evaluator to identify what data is needed at any point in the process, helping to avoid the problem of realizing near the end of an evaluation that data about three indicators are missing.

Many systems can be used to organize data. For the most part, it is a matter of personal preference which is used, but any system should meet certain requirements. First, as data is collected, it should be filed in a logical manner that will facilitate easy retrieval and identification of missing information. In addition, the data collection and filing system should guarantee the privacy of those involved. If possible, maintaining multiple copies of all data is advisable; thus, if data is lost from one location, it can be reconstructed. Finally, access to data should be limited to those who need it. This policy helps to control data loss and protects the privacy of subjects.

Analyze Data

The next step in the evaluation process is data analysis. For qualitative evaluations this process occurs simultaneously with data collection. As data is gathered, the evaluator studies it for trends and patterns. As these emerge, data is filed according to these emerging findings and the evaluator identifies methods of testing the findings by looking for additional support and contradictions.

Quantitative data analysis, however, generally occurs at specified points in the programmatic process, usually near the end of the evaluation process. Pre- and posttest data can usually be computer analyzed at the same time, although exceptionally large samples may necessitate the processing of pretest data shortly after collection.

Often the analysis of quantitative data involves the use of inferential statistics, statistical tests that provide information regarding the likelihood that results could have occurred by chance, rather than because of program activities. The use of inferential statistics is necessary whenever the evaluator wants to make an inference about a total population from the data obtained from just a sample. Common techniques include chi-square, t-tests, and analysis of variance. Assistance in computing these statistics can often be obtained from a local testing or evaluation person or from a nearby college.

Evaluators should try to synthesize the findings from the quantitative and qualitative components of the evaluation. Frequently, qualitative data can be used to explain quantitative findings. This holistic approach to evaluation provides a more satisfactory evaluation of program processes and impact than dichotomizing findings along quantitative-qualitative lines.

Report Findings

The next task is to report the findings. In presenting findings, the evaluator must often deal with two conflicting requirements: (1) presenting the data in a way that the audience will understand in the amount of time they are willing to give to the task and (2) presenting the data accurately, without masking its subtleties and qualifications and without the distortions that can accompany simplification and summarization of data. Here, a creative use of descriptive statistics is in order. These statistical techniques provide ways to describe a group and to communicate its essential characteristics quickly and easily. Common techniques include the use of charts and graphs, and such statistics as means, medians, standard deviations, and correlation coefficients.

In the case of formative evaluation, reporting should occur formally several times during the life of the evaluation. Informal reporting

will probably occur more frequently. Formal feedback usually takes one of two forms: (1) a written report provided to program personnel or (2) verbal communication with the project staff. Both forms are highly useful. A written record provides the staff with an unchanging document to which all can turn to identify successes and failures, thus reducing ambiguity and confusion about what the evaluator found. On the other hand, verbal communications can provide the flexibility needed to address the concerns of the project staff. This approach allows the evaluator to respond to the unique concerns of various program personnel, but it has the weakness of being subject to misinterpretation and skewed perceptions. Therefore, both written and verbal feedback are suggested. In preparing formative feedback in any format, the evaluator should indicate the degree to which goals and objectives have been achieved, make judgments, and offer suggestions and recommendations.

Summative assessment almost always assumes the form of a final evaluation report. This report should be written with the intended audience in mind. If there have been additions to the audience originally identified, the new audiences' needs and interests should be addressed. Unless the evaluator has other guidelines, the most logical means for organizing the final report is to report the findings by goal and objective. Each section should indicate the degree to which the subject goal and objectives were achieved. It is also important to remember that a primary purpose of most evaluations is to provide information for use in making programmatic decisions. Therefore, in a summative report the evaluator may want to include a section of recommendations and suggestions for program personnel, as well as for the funding agency, if that is appropriate.

A FACILITATOR'S GUIDE FOR PROVIDING LRE EVALUATION ASSISTANCE

This section of the handbook contains 14 workshop activities for use with project staff and others involved in LRE activities. The activities are designed to help those persons understand the steps in the evaluation model described in the previous section and to develop the skills needed to implement those steps.

The handbook activities are adaptable to a variety of situations and curriculum or program objectives. We recognize that workshops in which LRE project directors or other leaders have enough time to present all or even most of the activities will be rare. In addition, project staff or participating teachers and administrators may already have adequate understanding of some steps in the evaluation process and/or may not need to be familiar with all the steps. We have therefore designed the activities so that leaders can select those activities which seem most appropriate, arranging them in the order that best meets their needs. Thus, one leader may use selected activities in a single workshop, another may use nearly all of the activities in a workshop series, and a third may use only one or two activities to teach staff about a particular evaluation technique. We also encourage educators working in other areas of the social studies to vary the examples used in the activities--now drawn exclusively from LRE--to make them applicable to the particular content with which their participants are working.

Two aids to planning a workshop agenda are presented. The chart on the next page provides a brief overview of each activity, the length of time required, the step of the model to which the activity is related, and a list of the materials needed. All handouts and transparencies listed as being required are provided as black-line masters following the activity in which they are used; copies will need to be made. The facilitator will need to supply any underlined materials. Appendix A illustrates how the activities can be used in different workshop configurations.

No.	Title	Related Step in Model*	Description	Time Req'd	Materials Needed**
1	Determining Priorities	None; introductory	Rank order, discussion	30-45 minutes	Handout 1
2	The Evaluation Process in LRE	All	Lecture/discussion	20-30 minutes	Transparency 1, Handout 2, overhead projector
3	Goals for LRE	1	Card sort, discussion	1 hour	LRE goals cards, Handout 3
4	Stating LRE Objectives	2	Worksheet, discussion	1-1½ hours	Handouts 4-7
5	Organizing and Refining LRE Goals and Objectives	1-3	Worksheet, discussion	1-1½ hours	Handouts 2 and 8
6	Evaluation Techniques and Law-Related Education Questions	4-5	Brainstorming, worksheet, discussion	30-45 minutes	Handouts 9 and 10, newsprint and marking pens or chalkboard and chalk
7	A Variety of Evaluation Techniques	5	Reading, discussion	45-60 minutes	Handout 11
8	Indicators and Techniques	5	Individual or small-group planning	2-3 hours	Handouts 2 and 12, newsprint and marking pens
9	Using Likert Scales to Evaluate Student Attitudes	5	Worksheets, discussion, item development	3 hours	Handouts 13-17, newsprint and marking pens or chalkboard and chalk
10	Using Multiple-Choice Tests to Evaluate Student Learning	5	Worksheets, discussion, item development	2 hours	Handouts 18-21
11	Using Interviews to Collect Teacher and Student Data	5	Role play, instrument development, discussion	2-3 hours	Handouts 22-24, newsprint and marking pens or chalkboard and chalk
12	Using Observations to Evaluate Role Plays	5	Brainstorming, discussion, role play	1-1½ hours	Handouts 25-27, newsprint and marking pens or chalkboard and chalk, bag of powdered sugar, shoe, signs indicating various locations in a house, cardboard or real television
13	Collecting Data and Organizing Files	6	Reading, discussion	15 minutes	Handout 28
14	Analyzing and Reporting Data: Selecting the Appropriate Descriptive Statistics	7-8	Lecture/discussion, worksheets, small-group problem solving	3 hours	Handouts 29-32, newsprint, marking pens, tape

*Steps in model:

1--identify/clarify project goals
2--identify/clarify objectives related to goals
3--identify activities needed to achieve programmatic and instructional objectives
4--determine purpose and scope of the evaluation
5--develop the research design
6--collect data
7--analyze data
8--report findings

See pp. 3-17 for a detailed explanation of these steps.

**All handouts and transparencies are provided as black-line masters following the activities; copies will need to be made. The facilitator will need to supply any underlined materials.

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ACTIVITY 1:
DETERMINING PRIORITIES

Introduction: Educators, especially teachers, do not usually place a very high priority on evaluation. The purpose of this rank-order activity is to clarify that evaluation is one of many important activities in which LRE teachers must engage. The activity will set the tone for your asking the participants to place more value on evaluation, but not to drop everything to develop and administer pretests and posttests.

Objectives: Participants will be able to--

1. Identify those LRE activities upon which they place the most importance.
2. State the main reasons for their particular priority rankings.
3. State several reasons why it is important not to forget about evaluation in conducting LRE projects.

Time: 30-45 minutes

Materials Needed: Handout 1

Procedure:

1. Begin by stating that teachers of law-related education engage in many important activities and that the purpose of this exercise is to clarify how they do or would prioritize those activities that compete for their attention.
2. Distribute a copy of Handout 1, "Determining Priorities," to each participant, asking them to complete the rank-order activity as indicated in the directions.
3. Then ask participants to (1) write down the main reasons for their first and second choices and (2) select one of the activities that they did not place in the top five and write down the main reason that it did not receive a high ranking.
4. Ask participants to share their particular rankings and reasons. If the group includes more than 25 or 30 participants, you may want them to discuss their rankings in small groups before initiating a full-group discussion.

5. Summarize the major results of the discussion by identifying those activities that generally received high priority and those that received low priority. Most groups will rank the class learning activities highest (e.g., field trip, police as speaker, simulation) and the evaluation activities lowest (e.g., behavioral objectives, pretest/posttest, and semantic differential).

6. Discuss and identify the main reasons why evaluation so often receives a low ranking. Reasons usually include lack of training in the area, the idea that teaching is more important than testing, and evaluation's time-consuming nature.

7. State that similar factors, including the pressure of daily management, may prevent many LRE projects at the national, state, and local levels from conducting evaluation activities as thoroughly as they would like to.

8. State or brainstorm several reasons why it is important for LRE educators to place some priority on evaluation. For example:

--Evaluation can help projects operate more efficiently and effectively.

--Evaluation can help in efforts to disseminate and implement LRE in other schools and classes by providing evidence about what students learn.

--Evaluation can suggest changes that should be made to improve project operations or materials.

--Evaluation may be needed in order to attain additional funding.

--Evaluation is needed to demonstrate that project objectives have been achieved.

9. Conclude by stating that the remaining exercises and materials in the workshop will help participants learn how to conduct evaluation activities efficiently for the benefit of the entire LRE program.

DETERMINING PRIORITIES

Directions: You are a social studies teacher committed to teaching about law and our legal system. The district requires you to record two grades per week, so you must make up and grade some tests, quizzes, and papers. But you are free to decide how you spend the rest of your time. Listed below are nine activities that would be "good" to do with and for your students. Even taking work home in the evenings, however, you can probably only get five of these things done. Which would you do? Rank your choices from 1 to 5 with 1 being your top priority:

_____ Plan a field trip to the county courthouse to see a trial. Preparing for the trip will require organizing transportation, checking with teachers and administrators to avoid creating conflicts in the school calendar, getting parental permission and supervisory support, working with the judge to maximize learning, etc.

_____ Develop and use a simulation of a crime and the apprehension and trial of an accused person. A robbery of the school store could be staged, followed by an investigation, filing of charges, and a trial.

_____ Write specific behavioral objectives for the unit, being careful to include verbs that describe observable behaviors, the conditions under which the accomplishment of the objectives will be measured, and the criterion for successful completion of each objective.

_____ Take pre/posttest data from the last unit that the class studied and relate each item on the test to some aspect of the curriculum materials and class activities used. Then make inferences from the test data about which activities were successful in promoting learning.

_____ Visit the home of a student who seems withdrawn and lonely at school.

_____ Do some background reading in the development of law through history. This is an area you were exposed to only superficially in your undergraduate teacher preparation.

_____ Construct an attitude survey to determine if your unit changed the way students feel about officers of the law.

_____ Spend time in the public library with one student trying to find information about what lawyers do. This student is bright and has shown a keen interest in becoming a lawyer, but was unable to find anything on lawyers in the school library.

_____ Arrange with the local police department to bring a police officer into the classroom on a regular basis to talk informally, answer questions, and just be around the students.

Adapted from Robert W. Richburg, "Classroom Assessment in a Law and Humanities Elementary School Program," in Daring to Dream: Law and the Humanities for Elementary Schools, Lynda Carl Falkenstein and Charlotte Anderson, eds. (Chicago: American Bar Association, 1980), p. 276. Used by permission.

ACTIVITY 2:

THE EVALUATION PROCESS IN LRE

Introduction: Most people in education have a very narrow view of evaluation. Teachers often equate it with testing for the sole purpose of grading. For LRE projects, evaluation usually involves having participants say that you did a good job. The purpose of this lecture/discussion activity is to present a model of the entire process of evaluation for law-related education. The intent is to convey the idea that evaluation is a systematic, multi-step process that includes many procedures directly related to organizing and conducting a project effectively.

Objectives: Participants will be able to--

1. Identify the major steps in the presented model of evaluation for LRE.
2. State the key questions that need to be addressed for each step in the process.
3. State examples from LRE that relate to each step in the process.

Time: 20-30 minutes

Materials Needed: Transparency 1, Handout 2, overhead projector

Procedure:

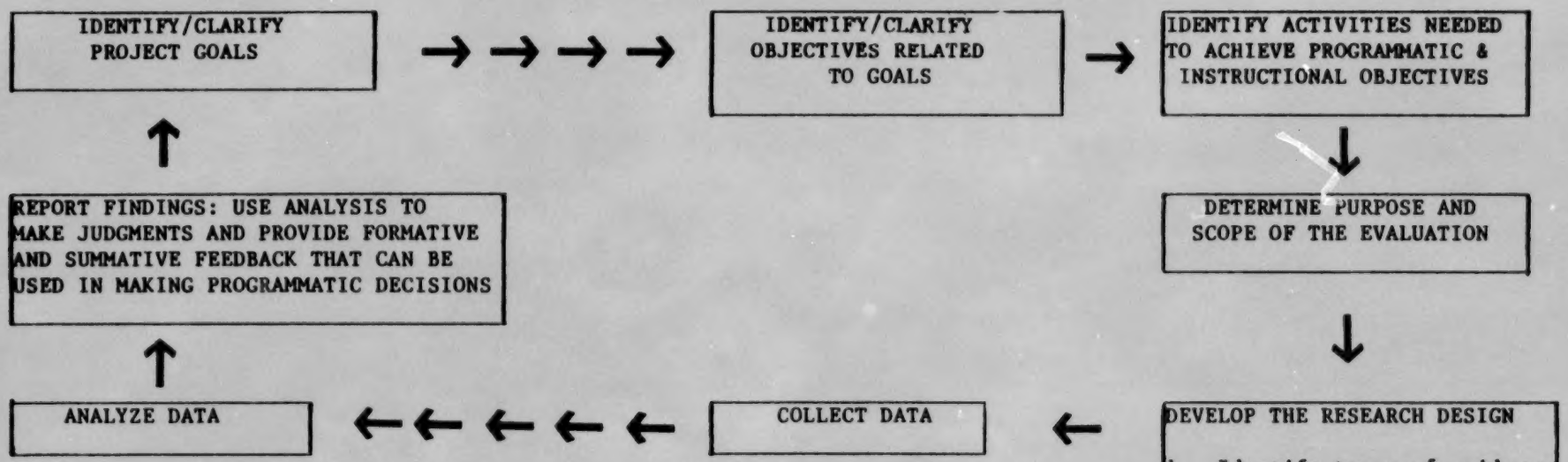
1. Introduce this activity by stating that many different models of the evaluation process have been developed and used in education. Indicate that the model you are going to present has been developed and used specifically for evaluating LRE projects, though it could be applicable to other areas.
2. Project Transparency 1, "An Evaluation Model for Law-Related Education Projects." You may also want to distribute a copy of the chart to each participant. Identify the major questions that need to be addressed in each step, illustrating the discussion with examples from LRE. The description of the model in the preceding section of this handbook provides the information you will need for this presentation. (You might also assign that section as a reading for participants.)

3. Answer any questions participants have concerning the model and its application to LRE.

4. Distribute copies of Handout 2, "LRE Project Management and Evaluation Form," to the participants. Note that this two-page form is a practical tool for relating five of the elements in the evaluation model--project goals, project objectives, project activities, indicators, and evaluation techniques. Participants will use the form later in the workshop to do just that. Also point out that the first three steps of the process (the three items on the first page of the form) should be implemented by a project regardless of any intention to formulate and conduct an evaluation. Stress that full application of this evaluation process will help ensure effective project management.

5. Conclude by stating that this evaluation model represents the ideal way to conduct evaluation in law-related education but that in the real world we must often settle for something less than the ideal. Explain that the remaining activities in the workshop will focus on specific aspects of the model in order to provide participants with the knowledge and skills needed to implement the various steps in the model.

A MODEL FOR EVALUATING EDUCATIONAL PROGRAMS


IDENTIFY/CLARIFY PROJECT GOALS
IDENTIFY/CLARIFY OBJECTIVES RELATED TO GOALS
IDENTIFY ACTIVITIES NEEDED TO ACHIEVE PROGRAMMATIC & INSTRUCTIONAL OBJECTIVES
DETERMINE PURPOSE AND SCOPE OF THE EVALUATION
DEVELOP THE RESEARCH DESIGN
1. Identify types of evidence
2. Identify criteria for success
3. Identify location of evidence
4. Identify an appropriate research design and data collection techniques
5. Consider control group issues
6. Select/develop instruments
7. Consider reliability/validity issues
COLLECT DATA
ANALYZE DATA
REPORT FINDINGS: USE ANALYSIS TO MAKE JUDGMENTS AND PROVIDE FORMATIVE AND SUMMATIVE FEEDBACK THAT CAN BE USED IN MAKING PROGRAMMATIC DECISIONS

Handout 2
(Activity 2)

LRE PROJECT MANAGEMENT AND EVALUATION FORM

PROJECT GOAL:

OBJECTIVES	ACTIVITIES	TARGET DATE

LRE PROJECT MANAGEMENT
AND EVALUATION FORM

INDICATORS	EVALUATION TECHNIQUES

ACTIVITY 3:

GOALS FOR LRE

Introduction: Development of evaluation plans for LRE projects begins with identification and refinement of the project goals. While different LRE projects can and do have different goals, certain criteria should be kept in mind when clarifying goals. The purpose of this card-sort activity is to help participants apply these criteria to a set of LRE goals, thus enabling them to do the same with the specific goals of their projects.

Objectives: Participants will be able to--

1. Distinguish between goals that are appropriate and attainable for a short-term LRE project and those that are not.
2. Explain the difference between programmatic and instructional goals.
3. Classify a set of LRE goals as either programmatic or instructional.

Time: 1 hour

Materials Needed: LRE goals cards, Handout 3

Procedures:

1. Introduce the activity by asking participants to brainstorm typical goals for LRE projects. This should result in a variety of goals, some fairly narrow in scope and others very broad. State that the purpose of this activity is to help participants examine and refine project goals so that they are clear guideposts for later work in specifying objectives, activities, and evaluation procedures.
2. Arrange the participants in groups of four to five members and distribute a set of LRE goals cards to each group. Tell participants to determine which of the 15 goals in the packet are appropriate and attainable for a one- to two-year LRE project and which are not. The groups should then sort the cards into two piles on this basis.

3. Ask each group to state which goals they thought were not appropriate and attainable and why. While some disagreement may occur, the goals that are stated so broadly as to be unattainable in a one- to two-year project are goals 1, 5, 7, 10, and 14. (These are, of course, not absolute answers. The size of the project and the community and schools involved are important factors in determining ability to reach those goals.) Other statements may need more specification at the objectives level, but could be attainable and are appropriate. Emphasize that unlike objectives, goals can be stated in general, nonbehavioral terms, but that to be useful their scope must be within reason given the project's resources and time.

4. Distribute a copy of Handout 3, "Defining LRE Goals," to each participant and discuss and clarify the definition of a goal and the difference between programmatic and instructional goals.

5. Tell each group to sort the ten appropriate goals into two categories--programmatic and instructional.

6. Ask each group to state which goals they classified as programmatic and which as instructional. Check these with our classifications: programmatic--3, 4, 9, 12, 13, and 15; instructional--2, 6, 8, and 11. There may be some disagreement about goals 6 and 9, both of which involve teachers. State that teachers are usually an intermediate target; students are the ultimate target group. For our purposes, however, since 6 is stated as an outcome and 9 as a process, they should be classified accordingly.

7. Conclude by stating that participants will have an opportunity to apply these criteria to their own project goals after an activity focusing on objectives for LRE.

GOAL 1	GOAL 2
CITIZENS IN FLORIDA WILL BE MORE KNOWLEDGEABLE ABOUT CIVIL LAW IN THE STATE.	STUDENTS WILL UNDERSTAND THE BASIC CONCEPTS PERTAINING TO THE LAW AND THE LEGAL SYSTEM.
GOAL 3	GOAL 4
THE PROJECT WILL DEVELOP AND EVALUATE A PROCESS FOR IMPLEMENTING LRE THAT CAN BE REPLICATED IN SCHOOLS ACROSS THE COUNTRY.	THE METROPOLITAN SCHOOLS WILL RECEIVE HELP FOR THEIR EXISTING LRE PROGRAMS.

GOAL 5 JUNIOR HIGH STUDENTS WILL ACT AS MORE EFFECTIVE AND RESPONSIBLE CITIZENS WHEN THEY BECOME ADULTS.	GOAL 6 TEACHERS WILL DEMONSTRATE KNOWLEDGE OF NEW LRE CONTENT AND INSTRUCTIONAL STRATEGIES.
GOAL 7 VANDALISM IN THE NEW YORK SUBWAYS WILL BE REDUCED.	GOAL 8 STUDENTS IN THE PROJECT WILL LEARN ABOUT THE LAW AND LEGAL SYSTEM IN VIRGINIA.

GOAL 9 TEACHERS WILL BE TRAINED TO USE LAW-RELATED EDUCATION MATERIALS EFFECTIVELY IN THEIR CLASSROOMS.	GOAL 10 THE PROJECT WILL DEVELOP AND INSTITUTIONALIZE AN LRE PROGRAM FOR THE CITY SCHOOLS.
GOAL 11 STUDENTS WILL DEVELOP MORE-POSITIVE ATTITUDES ABOUT THE LAW, POLICE, AND THE JUSTICE SYSTEM.	GOAL 12 THE PROJECT WILL ESTABLISH A RESOURCE CENTER FOR TEACHERS IN THE DISTRICT.

GOAL 13 THE PROJECT WILL INFUSE LRE INTO THE K-12 SOCIAL STUDIES CURRICULUM AT THE ELEMENTARY LEVEL.	GOAL 14 THE RATE OF JUVENILE DELINQUENCY IN THE CITY WILL BE REDUCED.
GOAL 15 THE PROJECT WILL INVOLVE COMMUNITY GROUPS IN THE IMPLEMENTATION OF LRE IN THE SCHOOLS.	

DEFINING LRE GOALS

Goals: Project goals are "statements, usually general and abstract, of desired states in human conditions and social environments."* Goals express the end conditions that the program seeks to achieve.

Programmatic Goals: Programmatic goals are broad, general statements of the activities and organizational changes the program seeks to initiate.

Example: The project will establish a law-related education component next year in all of the ninth-grade civics classes in the Fall River School District.

Instructional Goals: Instructional goals describe in broad terms what program participants are to know, feel, or do as a result of their participation.

Example: Students in ninth-grade civics classes will learn about the American legal system.

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*From Peter H. Rossi, Howard E. Freeman, and Sonia R. Wright, Evaluation: A Systematic Approach (Beverly Hills: Sage Publications, 1979), p. 54.

ACTIVITY 4:
STATING LRE OBJECTIVES

Introduction: Specification of project objectives is one of the most important steps in the LRE evaluation process. While all agree that well-stated objectives are a key to effective evaluation, views on what constitutes a well-stated objective vary. Rather than adding another view to this debate, this activity helps participants work through some of the main factors to be considered in specifying LRE objectives. The activity is intended to help participants decide on acceptable levels of objectives for their projects, thereby setting the stage for the following activity.

Objectives: Participants will be able to--

1. Identify a range of acceptable and unacceptable LRE objectives in terms of their levels of specificity.
2. State several important characteristics of a well-stated objective.
3. Write LRE objectives that fit a defined range of acceptability.

Time: 1-1½ hours

Materials Needed: Handouts 4-7

Procedure:

1. Introduce this activity by stating that while goals can be very broad and general statements of desired outcomes or accomplishments, objectives must be stated more specifically, focusing more on actual desired behaviors. Continue the introductory remarks by making the following points:

   a. How to specify objectives for instructional and programmatic purposes has been the focus of considerable work and discussion among educators. There has also been considerable disagreement regarding what constitutes an acceptable statement of objectives. One issue is whether a given objective is an important one for LRE programs. This issue, while important, is not an evaluation issue and therefore is not dealt with here.

b. Another area of disagreement is the level of specificity required in a statement of objectives. Some educators demand more rigor than others. For example, for some people, "Students will be able to identify the main roles in a criminal court case" is an acceptable objective. Those who opt for strict behavioral objectives would not find this statement acceptable. They would prefer a statement similar to the following: "Eighty-five percent of the students in the program will be able to list at least six roles in a criminal court case."

c. We do not believe that it is easy or necessarily useful to draw an absolute distinction between acceptable and unacceptable objectives. Reasonable people have reasonable differences of opinion on this issue. We do believe, however, that objectives for LRE programs and projects must be stated specifically enough to provide the evaluator with some guidance in how the objective will be evaluated or measured and in how to tell when the objective has been achieved.

d. This activity involves participants in working with LRE objectives so that the key points and issues are illuminated and clarified, thus enabling them to determine how specifically their own objectives should be stated.

2. Distribute copies of Handout 4, "LRE Objectives: A Clarifying Exercise," and ask participants to complete the exercise according to the directions.

3. After participants have completed the worksheet, debrief by asking the following questions: Which objective was the first one rated as acceptable? Why? Did you rate any of the statements as U/A? Did anyone reach the point of overkill? Where? Most participants will begin rating the statements acceptable at number 3, although they may reconsider once they have heard the later ones. Point out the key factors that need to be addressed for this objective to be helpful for evaluation purposes: how many teachers, how many role plays, the content of the role plays, and the time period within which they should be completed. Such other information as the number of students and their roles is helpful but may not be necessary, depending upon the nature and scope of the project and its evaluation plans.

4. Point out that this example has dealt with the extent and specificity of the quantity of outcome, not with its quality. In many

cases, specifying the level of quality desired is also advisable. Quality can also be stated at various levels of specificity.

5. Distribute copies of Handout 5, "LRE Objectives: Specifying Quality," and have participants circle the number of the phrase they believe defines an acceptable level of specificity. Discuss their reasons for these choices.

6. Point out that if you know what instruments you are going to use, you can get very specific in formulating your objectives. If not, then this level of specificity will need to be dealt with when instruments are developed or data is analyzed.

7. Distribute copies of Handout 6, "Action Verbs for Instructional Objectives," pointing out the importance of using action verbs in stating objectives specifically. This is a necessary but not sufficient condition for a well-stated objective. Have participants scan these lists; discuss any questions they have.

8. Distribute copies of Handout 7a, "Writing Well-Stated LRE Objectives." Ask participants to complete the task as indicated on the directions. Tell them they may use the list of action verbs in rewriting the objectives. Have participants share their answers. There may be several different statements of each objective that are acceptable, depending upon the criteria of acceptability that each participant has established. Have participants compare these statements to those on the first handout to determine what range of specificity they reflect.

9. Conclude by summarizing that well-stated objectives:

--Focus on actual behaviors.

--Provide enough specificity to help evaluators decide what to do.

--Provide enough specificity to help program people know when objectives have been attained.

--Are directly related to a goal.

LRE OBJECTIVES: A CLARIFYING EXERCISE

Directions: Shown below are eight statements of an LRE objective stated at increasing levels of specificity. As you read each statement, decide whether you think the statement is acceptable in terms of specificity. Use the following to record your responses: U = Unacceptable; A = Acceptable; O = Overkill (more specificity than you want).

If you are not sure, use the two letters that correspond to the two responses that you are debating about (e.g., U/A). If you change your mind about one statement after reading a later one, cross out your original response and add your new one.

The Statements

GOAL: Train 20 secondary social studies teachers to use various LRE strategies in their social studies classes.

OBJECTIVES:

_____1. LRE project teachers will conduct role plays.

_____2. All LRE project teachers will conduct role plays in their social studies classes.

_____3. All LRE project teachers will conduct at least three role plays in their social studies classes.

_____4. All LRE project teachers will conduct at least three role plays in their social studies classes within two months after the workshop.

_____5. All LRE project teachers will conduct at least three role plays on search and seizure and police powers in their social studies classes within two months after the workshop.

_____6. All LRE project teachers will conduct at least three role plays on search and seizure and police powers, each taking at least 20 minutes, in their social studies classes within two months of the workshop.

_____7. All LRE project teachers will conduct at least three role plays on search and seizure and police powers from the CRLSMFT materials, each taking at least 20 minutes, in at least two of their social studies classes within two months of the workshop.

_____8. All LRE project teachers will conduct at least three role plays on search and seizure and police powers from the CRLSMFT materials, each taking at least 20 minutes, in at least two of their social studies classes within two months of the workshop, so that at least 50 percent of the students in these classes have played at least once the role of policeman, judge, or criminal.

LRE OBJECTIVES: SPECIFYING QUALITY

These phrases could be added to the statements of objectives from the previous handout to add a "quality" dimension.

1. will successfully conduct

2. will successfully conduct as determined by student surveys and tests

3. will successfully conduct in terms of student interest, involvement, and knowledge gain as determined by student surveys and tests

4. will successfully conduct as indicated by a moderate to high level of student interest, involvement, and knowledge gain as determined by student surveys and tests

5. will successfully conduct as indicated by a moderate to high level of interest, involvement, and knowledge gain for at least 80 percent of the students in the LRE program as determined by student surveys and tests

6. will successfully conduct as indicated by at least a 3.5 score on the "LRE Interest and Involvement Inventory (III)" and at least a 5.0 gain score on the "LRE Police Role Play Knowledge Test" for at least 80 percent of the students in the LRE program

ACTION VERBS
FOR
INSTRUCTIONAL OBJECTIVES

KNOWLEDGE: cites, defines, describes, identifies, lists, matches, names, points out, recalls, recognizes, relates, remembers, repeats, rephrases, reports, states, tells, writes

COGNITIVE PROCESSES:

Classifying: arranges, associates, catalogs, distinguishes, groups, labels, orders, organizes, outlines, places, rearranges, reorders, sorts, structures

Interpreting: composes, converts, defines, enacts, explains, expresses, illustrates, interprets, paraphrases, presents, renders, restates, simulates, states in own words, summarizes, transforms, translates

Comparing: cites, describes, detects, differentiates, discriminates, distinguishes, expresses, points out

Generalizing: composes, constructs, derives, develops, expresses, forms, formulates, generates, produces, proposes, relates

Inferring: deduces, develops, derives, draws, extends, extrapolates, fills in, formulates, generates, presents, proposes

Analyzing: analyzes, breaks down, detects, differentiates, divides, examines, experiments, expresses, extracts, identifies, illustrates, inspects, inventories, lists, outlines, points out, questions, relates, separates

Synthesizing: assembles, composes, constructs, combines, creates, depicts, derives, designs, develops, devises, expresses, formulates, illustrates, integrates, makes, organizes, prepares, plans, produces, puts together, proposes, synthesizes

Evaluating: appraises, argues, assesses, chooses, criticizes, decides, describes, evaluates, explains, grades, judges, justifies, measures, ranks, rates, rejects, scores, states worth of, validates, weighs

AFFECTIVE PROCESSES: advocates, acclaims, approves, believes in, chooses, defends, demonstrates, opposes, praises, prefers, reacts positively or negatively toward, recommends, rejects, selects, supports

SKILLS: carries out, completes, constructs, draws, executes, interprets, locates, measures, performs, puts into practice, shows, translates

WRITING WELL-STATED LRE OBJECTIVES

Directions: Rewrite each objective that you believe needs more clarification and specificity.

1. Students will be able to explain how to use a small claims court.

2. Students will increase their citizenship participation in the school.

3. Teachers will be able to identify the case study approach as a main feature of the Street Law materials.

4. Participating students will be more likely than control students to express the belief that all persons should be treated equally by the law.

5. This project will influence the implementation of LRE in the city's schools.

6. Each of the ten participating teachers will use at least five of the 15 LRE units during the course of the year.

7. Ninety percent of the students will learn eighty percent of the basic concepts in the CRF materials.

ACTIVITY 5:
ORGANIZING AND REFINING
LRE GOALS AND OBJECTIVES

Introduction: Participants now apply the concepts and skills learned in the previous activities to the goals and objectives of their particular projects. Using the "LRE Project Management and Evaluation Form" they organize their goals, objectives, and project activities to prepare for planning their evaluation procedures.

Objectives: Participants will be able to--

1. Write their project goals using the principles taught in previous activities.
2. Write their objectives using the principles taught in previous activities.
3. Organize their lists of project goals and objectives using a form.
4. Write project activities associated with their specific objectives.

Time: 1-1½ hours

Materials Needed: Handouts 2 and 8

Procedure:

1. Introduce this activity by stating that the time has come to apply the principles for writing good LRE goals and objectives.
2. Distribute copies of Handout 8, "LRE Project Management and Evaluation Form: Page 1 Illustration," and explain that this is the format they will use to specify and organize their project goals and objectives. State that this form helps to tie together goals, objectives, and activities, and, later, other aspects of the evaluation plan.
3. Tell the participants to complete page 1 of the form (distributed in Activity 2) for their projects following the example provided. Circulate among the participants to provide help as needed and to ensure that everyone is on the right track. If time is limited, have each

participant focus on only one goal and a limited number of objectives. They can then complete the process following the workshop.

4. Conclude by asking participants to share their observations about doing this task. State that they are now ready to move on to the heart of the evaluation process.

LRE PROJECT MANAGEMENT
AND EVALUATION FORM:
PAGE 1 ILLUSTRATION

PROJECT GOAL (Programmatic): A group of social studies teachers will be trained to use law-related education materials and activities effectively in their classrooms.

OBJECTIVES	ACTIVITIES	TARGET DATE
1.0 Participating teachers will be able to identify the main features of Street Law, CRF, and LFS materials.	1.1 An intensive two-week training workshop for 30 social studies teachers will be held in which materials and activities from the Street Law, Constitutional Rights, and Law in a Free Society projects will be demonstrated and examined.	8/14-8/27/81
2.0 Participating teachers will teach at least one activity from each of these three sets of materials.	2.1 During the two-week workshop teachers will be trained to use a variety of activities from these materials and will be provided opportunities to practice using these activities.	8/14-8/27/81
3.0 Participating teachers will select specific activities and materials and identify where in their existing courses they will be taught.	3.1 At the conclusion of the workshop teachers will list those materials and activities they will teach in their existing courses and will include these in an outline of those courses.	8/27/81

ACTIVITY 6:
EVALUATION TECHNIQUES AND
LAW-RELATED EDUCATION QUESTIONS

Introduction: Many evaluation techniques can be used to assess LRE programs, depending upon the specific objectives and questions of the project. This activity is intended to introduce some of these techniques and to help participants think about their most appropriate applications in law-related education.

Objectives: Participants will be able to--

1. List several different qualitative and quantitative evaluation techniques.
2. Select the techniques most appropriate for specific LRE evaluation questions.
3. Identify factors that need to be considered in selecting appropriate evaluation techniques.

Time: 30-45 minutes

Materials Needed: Handouts 9 and 10, newsprint and marking pens or chalkboard and chalk

Procedure:

1. Introduce the activity by asking participants to brainstorm a list of evaluation techniques. Post these on the board.
2. Explain the difference between qualitative and quantitative techniques, using the description provided in the model.
3. Take each technique listed on the board and ask the participants to classify it as qualitative or quantitative. Make sure that their answers match those provided in the model.
4. State that each type of technique has certain advantages and disadvantages depending upon the intended use.
5. Distribute copies of Handout 9, "Evaluation Techniques and Law-Related Education Questions," and tell the participants to work in groups of three to determine the most appropriate technique for each question.

6. Go over each item, clarifying the correct answer and asking participants why they selected a particular technique. In some cases, more than one technique would be useful. For your convenience possible answers are provided below:

1. 8
2. 1, 2, or 8
3. 1, 2, or 4
4. Depends on definition of effective
5. 4 or 6
6. 7 or 8
7. 1 or 4
8. 1 or 2
9. 1 or 2
10. 3
11. 1, 4, or 8
12. 5

7. Discuss the factors that must be considered in selecting evaluation techniques: cost, number of students (or subjects), amount of time and personnel, the kind of information needed, and the level of objectivity needed.

8. Conclude by distributing and discussing Handout 10, "Major Characteristics of Four Information-Gathering Techniques." (If participants are not very knowledgeable about evaluation techniques, you may want to use this handout at the beginning of the activity so participants can use it to complete the matching exercise.)

EVALUATION TECHNIQUES AND LAW-RELATED EDUCATION QUESTIONS

Worksheet

Directions: Below is a list of specific evaluation techniques. For each of the following questions, identify the technique(s) most appropriate for gathering information to answer that question.

1. Questionnaire/Survey
2. Interview
3. School Documents or Records
4. Structured Observation:
   (a) Checklist
   (b) Rating Scale
   (c) Formatted Systems
5. Anecdotal Records of Unstructured Observation
6. Analysis of Homework or Classwork
7. Essay Test
8. Teacher-Made or Standardized Tests

_____ 1. Do students in your project know the basic facts from LRE instruction?

_____ 2. Have students' attitudes toward police changed since the beginning of LRE instruction?

_____ 3. How interested in LRE are the students at Jackson High School?

_____ 4. How effective has LRE instruction been in the 30 pilot classrooms?

_____ 5. What aspects of the problem-solving process can your students apply to a law-related situation?

_____ 6. Have the 600 students in the LRE project improved their reasoning skills?

_____ 7. Did the teachers in my project use the LRE materials about which they learned at the awareness workshops?

_____ 8. What do your project teachers like and dislike about the LRE materials they have used?

_____ 9. How and why did the 12 teachers in your project get involved in LRE?

_____ 10. Has the level of vandalism at Southern Hills Junior High decreased in the past six months?

_____ 11. Do the 300 students in your LRE program have more respect for authority and the law as a result of that program?

_____ 12. How well have the 20 teachers in your project used the LRE strategies that they learned in the inservice training sessions?

MAJOR CHARACTERISTICS OF FOUR
INFORMATION-GATHERING TECHNIQUES

	INQUIRY	OBSERVATION	ANALYSIS	TESTING
Types of Instruments	Questionnaire	Anecdotal records	Homework assignments	Teacher-made tests
	Interview	Checklist	Projects	
	Sociometric device	Rating scale	Reports & essays	Standardized tests
	Projective instruments	Interaction records	Behavioral performance	
Kind of Information Available	Opinions	Performance or the end products of some performance	Learning outcomes during the learning process (intermediate goals)	Attitude and achievement
	Self-perceptions			Terminal goals
	Subjective judgments	Affective (especially emotional reactions)		Cognitive outcomes
	Affective (especially attitudes)		Cognitive & psychomotor skills	Maximum performance
	Social perceptions	Social interaction psychomotor skills	Some affective outcomes	
		Typical behavior		
Objectivity	Least objective	Subjective but can be objective if care is taken in the construction & use of instruments	Objective but not stable over time	Most objective & reliable
	Highly subject to bias & error			
Cost	Inexpensive but can be time-consuming	Inexpensive but very time-consuming	Fairly inexpensive	Most expensive but most information gained per unit of time
			Preparation time is somewhat lengthy but crucial	

From Terry D. TenBrink, Evaluation: A Practical Guide for Teachers (New York: McGraw-Hill, 1974), pp. 136-49. Used by permission.

ACTIVITY 7:
A VARIETY OF EVALUATION TECHNIQUES

Introduction: While a wide variety of evaluation techniques are available for use in LRE, each technique has certain advantages and disadvantages. LRE project personnel need to be aware of these factors so they can select those techniques that are most appropriate for their particular needs. This activity is a detailed follow-up to the previous one, in which participants selected appropriate techniques and discussed general factors that must be considered when deciding on evaluation methods. Participants will now read and discuss a handout that explains and illustrates various techniques and identifies their advantages and disadvantages.

Objectives: Participants will be able to--

1. Explain at least eight different evaluation techniques that can be used in LRE projects.
2. Illustrate each of these techniques with an example related to LRE.
3. List at least two advantages and two disadvantages related to each of these evaluation techniques.

Time: 45-60 minutes

Materials Needed: Handout 11

Procedure:

1. Introduce this activity by stating that before one selects appropriate evaluation techniques, each technique must be explored in depth to fully grasp its advantages and disadvantages.
2. Distribute copies of Handout 11, "Techniques Useful in Evaluating Student Achievement." Allow participants time to read this paper.
3. Conduct a full-group discussion to clarify the main points of this paper and to answer any questions participants have about each technique.

4. Conclude by stating that selection of evaluation techniques always involves trade-offs--rarely can you choose the ideal instrument with no disadvantages. The best you can do is make the best possible selection and be aware of the limitations related to that technique or select two or more complementary techniques (if time and resource constraints allow use of multiple techniques).

TECHNIQUES USEFUL IN EVALUATING PUPIL ACHIEVEMENT

I. INQUIRY TECHNIQUES

A. Questionnaires/Surveys

Description: Survey questionnaires are an excellent method for assessing the opinions, attitudes, and behaviors of large numbers of individuals. Questionnaires can be developed in two formats--open-ended and closed. Open-ended formats present respondents with a series of questions which they can answer in their own words. This approach has the advantage of not forcing the respondent into a response category that does not accurately capture his or her true perceptions. Often, trained scorers can classify open-ended responses into categories derived from a preliminary scan of all of the responses.

Unlike the open-ended questionnaire, closed format questionnaires present the respondent with a limited number of responses to each question. Usually, the respondent checks the block or circles the letter or number of the alternative that most accurately describes his or her response. This type of format allows an evaluator to assign each response a numerical value, and computer cards can be punched directly from the questionnaires, thus making it less costly than the open-ended instrument.

A critical factor with both types of questionnaires is the selection of an appropriate sample. Questionnaires are often used with a sample of some group because information cannot be collected from every group member. Since a sample is always smaller than the total group, the sample selected must be representative of the entire group if the results are to be used to draw generalizations about the entire group. Although survey questionnaires can be used to gather data from large audiences, they often do not have the depth that an evaluator might desire. For this reason, interviews are often used to complement questionnaires in order to collect detailed information from a limited number of a group that was surveyed.

Sample 1: Open-ended survey questionnaire.

1. Do you feel that the police in your neighborhood are fair? _____

_____

2. If you feel that the police are unfair, please explain why you feel that way. _____

_____

Material in this section has been drawn and adapted from several sources: James B. Kracht, "Evaluation," in The Methods Book: Strategies for Law-Focused Education, Arlene F. Gallagher, ed. (Chicago: Law in American Society Foundation, 1978), pp. 126-135; Terry D. Tenbrink, Evaluation: A Practical Guide for Teachers (New York: McGraw-Hill, 1974), pp. 141-149; and Affective Measures for Educational Evaluation (Tucson, Arizona: Education Innovators Press, 1972). Used by permission.

Sample 2: Closed survey questionnaire.

1. Do you feel that the police in your neighborhood are fair?

_____ Yes
_____ No
_____ Most of the time
_____ Seldom

2. If you feel that the police are not fair all of the time, please check the response that best explains why you feel that way.

_____ They pick on minorities.
_____ They pick on kids.
_____ If you have money, they don't bother you.
_____ They just don't like certain people for no reason.
_____ Sometimes they've had a bad day and take it out on everyone.
_____ Other (specify) _____

Treatment of Results: Responses to open-ended questionnaires must be coded before they can be analyzed; this coding can be an expensive and lengthy proposition, especially if the questionnaire is longer than one page. Once coded, the results can be subject to a variety of statistical treatments, just as the responses to closed questionnaires can be.

Advantages: Survey questionnaires are an efficient method for collecting data from large groups. Closed questionnaires can be quickly converted to a form that allows statistical treatment.

Disadvantages: Poor sample selection can skew results. Answers are often superficial. Closed questionnaires may force people to make choices that do not accurately represent their views.

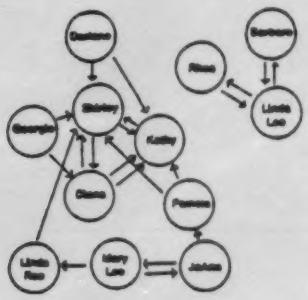
B. Sociometric Techniques

Description: Sociometric techniques provide a means of determining the social organization within a group. Sociometric instruments can provide information about how popular students are within their peer group.

Sample:

Write the names of the three classmates you would most like to have sit near you. 1. _____ 2. _____ 3. _____

Treatment of Results: Results can be graphed as shown below:



Advantages: Data can be used to organize classroom groups and to help the teacher facilitate the social adjustment of individual students. Data can also be used to evaluate the influence of school practices on students' social relations.

Disadvantages: Data do not indicate why a particular social structure evolved or what should be done given a certain social structure.

C. Attitude Scales

Semantic Differential:

Description: The semantic differential is very effective in measuring students' attitudes toward a particular concept. Students are asked to rate a concept along a series of continua formed by pairs of bipolar adjectives. Scales usually contain five or seven positions, with the middle position representing neutrality. Semantic differential scales are easy to formulate and are widely applicable. When administered in a pre/post format, semantic differentials provide important diagnostic data, as well as an indication of the amount and direction of attitudinal change that occurred during a unit.

Sample 1:

Place an X in the blank of each scale that most nearly describes your reaction to the concept listed below.

My LRE teacher is:

1. unpleasant	|_____|	pleasant
2. active	|_____|	passive
3. bad	|_____|	good
4. pleasing	|_____|	annoying
5. relaxed	|_____|	tense
6. deliberate	|_____|	careless
7. simple	|_____|	complex

Sample 2:

The purpose of this activity is to measure your feelings about the police. There are no right answers. Place a check on each scale at the point that best represents your feelings.

POLICE

Valuable	_____	_____	X	_____	_____	Worthless
Bad	_____	_____	X	_____	_____	Good
Friendly	_____	_____	_____	X	_____	Unfriendly
Unpleasant	_____	X	_____	_____	_____	Pleasant
Helpful	_____	_____	_____	X	_____	Not Helpful
Unfair	X	_____	_____	_____	_____	Fair

Treatment of Results: Semantic scales are scored by assigning a numerical value of 1 to the least desirable position and increasing the value of each position by 1. In the examples given, negative feelings about a value equal 1, and positive values equal 5. A total score can be computed for each concept to indicate overall attitude. In sample 2, the total is computed as follows: 3 + 3 + 2 + 2 + 2 + 1 = 13. Since a neutral score of 3 on each of the six scales would total 18, it can be concluded that this individual possesses a somewhat negative attitude toward police.

Advantages: Semantic differentials are adaptable to varying research demands and are quick and economical to administer and score.

Disadvantages: Respondents can easily fake their responses. Effective use therefore requires good rapport with the individuals tested and a sincere belief on their part that frank responses are in their best interest. Scales yield perceptions of what is, rather than evidence of what is.

Likert Scales:

Description: Likert scales are also effective in measuring student attitudes. These scales consist of a set of statements that students are asked to respond to by indicating the extent to which they agree or disagree. The responses can be used to infer the attitudes students possess toward selected concepts. Like the semantic differential, if used in a pre/post format, the Likert scale can provide evidence for evaluating the effects of instruction.

Sample 1:

U.S. Supreme Court justices are often influenced by politics in their decisions.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

U.S. Supreme Court justices should be given a ten-year appointment rather than a lifetime or good-behavior appointment.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

Sample 2:

Judges are very fair.

Sample 3:

Circle the response that best describes how you feel.

1. I can't wait until I am grown up.
   Always Very Often Often Not Very Often Never

2. I feel good.
   Always Very Often Often Not Very Often Never

3. I have a hard time reading math books.
   Always Very Often Often Not Very Often Never

4. My parents understand my problems.
   Always Very Often Often Not Very Often Never

5. I like to be around books.
   Always Very Often Often Not Very Often Never

Treatment of Results: Responses can be quantified by assigning the number 1 to the least desired response and numbering each response consecutively, ending with the highest number for the most desired response.

Advantages: Likert scales are adaptable to varying research demands and are quick and economical to administer and score.

Disadvantages: Respondents can easily fake their responses. Effective use therefore requires good rapport with the individuals tested and a sincere belief on their part that frank responses are in their best interest. Scales yield perceptions of what is, rather than evidence of what is.

D. Interviews

Description: Interviews can be unstructured or structured. Unstructured interviews have no established sequence of questions; each question flows from the previous one. This approach is especially useful when general information or preliminary understanding of how participants perceive a situation is sought. For example, an interviewer might ask a student participating in a new program in civil law, "How well is the program working for you?" The very general nature of this question allows the respondent a great deal of freedom in responding. This flexibility can help the evaluator identify issues for more-detailed examination, but it makes comparison of interviews and analysis difficult.

Structured interviews, on the other hand, focus upon specific issues that are predetermined by the interviewer. The interviewer approaches each interviewee with the same set of questions. In some instances, the interviewee is forced to select a response from a limited number of choices presented by the interviewer. This is known as a closed format. When the interviewee can respond to predetermined questions in his/her own terms, the interview is said to have an open-ended format. Both closed and open-ended structured interviews provide a great deal of detailed information about a specific issue. However, unless the evaluator understands the situation clearly, the questions may be inappropriate.

Sample 1: Open-ended interview.

1. Do you think it's right to bus students to different schools in order to balance the enrollment racially? Why or why not?

2. Would you mind being bussed five miles for that purpose? Why or why not?

3. For what purposes would you be willing to ride a school bus five miles or more each day?

Sample 2: Closed interview.

1. Do you think accused criminals should always have the right to bail?

_____ Yes, always
_____ No, not if they are repeat, violent offenders
_____ No, not if they are violent offenders
_____ Other

2. Do you think judges discriminate in setting bail for "white-collar" criminals?

_____ No, they are fair
_____ Yes, they are easier on white-collar criminals
_____ Yes, they are harder on white-collar criminals
_____ Other

Advantages: Interviews provide in-depth affective information of a highly personal nature about students' opinions, interests, and attitudes. They can be used frequently as a normal part of the communication between teacher and student.

Disadvantages: Administration and scoring can be very time consuming. In addition, interviews are not useful if one needs the same information about all students in the class.

E. Projective Techniques

Description: Projective techniques allow students to react to an open-ended stimulus, with very little limitation imposed by the structure of the instrument. Although the results of projective techniques are not quantifiable, they do provide evidence useful in appraising an individual's feelings, thoughts, and attitudes. Three types of projective techniques will be discussed here: open-ended titles, open-ended sentences, and unfinished stories.

Open-ended titles are simple and effective. Students are asked to discuss orally or in writing a response to a theme. The results reveal feelings and attitudes, as well as the respondents' basic understanding of the topic.

Another simple device is the open-ended sentence. Students are asked to complete a sentence and, if they wish, explain their position. Feelings and attitudes are especially apparent in these responses.

Unfinished stories are a variation of the two techniques described above. Usually, a story is read or a film is shown; the ending of the story or film is incomplete. Students are asked to write, act out, or discuss possible endings. Again, feelings, attitudes, and values are revealed in students' responses.

Sample 1: Open-ended titles.

1. My First Contact with the Law
2. A Day in the Life of a Police Officer
3. What Should be Done About Inequality
4. Changes Needed in Our Country

Sample 2: Open-ended sentences.

1. The local issue that disturbs me most is . . .
2. Police officers are okay, except for . . .
3. If I did not agree with a law, I would . . .
4. My advice to the Supreme Court would be . . .
5. The trouble with being honest is . . .

Sample 3: Unfinished stories.

Terry had just moved into the neighborhood. Though she missed her old friends, she was really beginning to like the new place. Her father had a better job, their house was a lot nicer, school was going well, and she had made some new friends. In fact, George and Judy had become great friends. They lived next door to each other about eight blocks away from Terry. Terry had been asking her mother for the past two weeks if she could go home with them after school to play basketball. The answer had always been no, until today.

As Terry walked home with George and Judy, they explained that they usually stopped by the drugstore to "pick up" a few candy bars. It was just a "little game" they played, they said. Terry told them she had enough money to buy candy for all of them. Judy said the idea was to see how much you could "lift" without getting caught and that Terry was "chicken" if she didn't go along with the plan.

1. What do you think Terry did?
2. Why do you think she did that?
3. What do you think you would do?

Treatment of Results: Results are often difficult to interpret. One way of treating the results is to examine responses and classify them according to level of ego development. Often, a clinical psychologist's assistance will be needed in interpreting the results obtained from projective techniques.

Advantages: Faking responses is difficult. Techniques provide information about students' feelings, biases, and reasoning patterns.

Disadvantages: Information obtained is often unreliable, and results are difficult to interpret. Usually, a clinical psychologist should interpret the data.

II. OBSERVATION TECHNIQUES

Teachers and students can use a variety of observation techniques in their classrooms. These techniques can be classified into two major groups: structured and unstructured. Structured observations require use of instruments--checklists, rating scales, or some other structured format. Unstructured observations do not require use of instruments, although some recording devices may be developed. The discussion below focuses on unstructured observation, use of anecdotal records with unstructured observation, and various methods of structured observation.

A. Unstructured Observation

Description: Most teachers use unstructured observation every day, although they may do so unsystematically and with less-than-optimal efficiency. At the end of the day, most teachers can comment, "Gee, that lesson was super. The kids really responded" or "What a dud! Today's lesson started out badly and went downhill from there." These types of comments are based upon teachers' observations of the behaviors students exhibit in their classrooms.

By having colleagues observe and systematically record what they see happening in classes, teachers can learn a great deal about the general climate and operation of their classes; for example, the general level of participatory skills, content knowledge, level of interest, and group work skills. Unstructured observation can also provide detailed insights into teachers' management and instructional styles and students' responses to them.

The most general unstructured observation technique seeks to record as accurately as possible the comments and behaviors of students and teachers during a lesson. Descriptive statements such as "three students are looking out the window and four are playing cards" are preferable to impressionistic statements ("some students seem bored").

Sample:

Teacher writes on board: USMC vs. Robert Garwood

Teacher: Good morning. Today we're going to consider a case in corrective justice, but first let's review. As you know, we've been studying the concept of justice, what's fair. What specifically is corrective justice?

Student A: A fair response to a wrong or injury.

Teacher: Okay. Can someone give me an example?

Student B: A jail term for armed robbery.

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Treatment of Results: Careful analysis of unstructured observation notes will often suggest areas that may deserve closer attention and additional observation. For example, a teacher may notice that he/she mediated every student comment, never giving students an opportunity to interact directly with one another. Unstructured observations might also suggest that particular students work poorly together. Additional observations might demonstrate that placing these students in other groups improves their group work skills. Instructional objectives should be kept in mind during transcript analysis.

Advantages: Unstructured observations can provide a great deal of information of import to classroom teachers. The flexibility of unstructured observations allows collection of information about a wide range of topics, and no time is required for instrument development.

Disadvantages: Unstructured observations require the cooperation of another adult who, if untrained, may have difficulty recording the great number of statements and events that occur during a class. In addition, analysis of transcripts takes time.

B. Anecdotal Records

Description: Anecdotal records present brief sketches of the actions of individual students, small groups of students, or students confronted with a situation of very limited duration. While maintaining such records is time consuming, they can be a valuable aid in appraising student growth. A folder containing a series of sheets, each headed with a student's name, provides easy access to the data. Entries can then be made during or at the end of the school day. The record should include the date of the observation and a brief, objective description of the behavior observed.

Sample 1:

Name: Lloyd Larkins Dates. Nov. 2 to Nov. 26th

Date	Observation	Comment
11/02	Did not pay attention and created discipline problem during introduction to Juvenile Law Unit.	He seems as bored with this as with everything else.
11/08	Still has not participated in class discussion.	
11/18	Participated in discussion of case study on juvenile offenders.	Interest seems to be picking up
11/26	Volunteered to take part in role-play of juvenile hearing.	One of the few times this year that I've had willing cooperation from him.

Sample 2:

Class: Fifth Grade Pupil: John Smith
Date: 2/23/81 Place: Classroom

Incident: As class started, John asked if he could read a story he had written the day before. I gave him permission and he came to the front of the room. John began to read the story in a very low voice. When he had been reading for about 30 seconds, Sharon, who was sitting at the back of the room, asked John to read louder. At this point, John tore up the pages he was reading and went back to his seat.

Interpretation: John appears to enjoy not only writing, but sharing his creations with other people. It seems, however, that he is very nervous and gets upset easily when he receives the slightest criticism, as noted by his tearing up of his story and refusal to continue.

Treatment of Results: Analyzing results can be very difficult. The observer's interpretation of observations can be noted with each anecdotal record, as shown in the two samples above. Analysis of change over time can be done after a number of anecdotal records have been collected.

Advantages: Anecdotal records provide a description of actual behavior in natural settings. They can be used to collect information on very young pupils or others who have limited communication skills.

Disadvantages: Time required to maintain an adequate system of records may be substantial. Maintaining objectivity in observing and recording pupil behavior is difficult, as is analysis of the data. Care must be taken to obtain an adequate sample of behavior.

C. Structured Observation

By definition, unstructured observations are somewhat diffuse and unfocused. Structured observations, on the other hand, rely upon a range of observation techniques that focus on specific topics. For example, in order to gather information about the types of questions students ask police officers, a teacher might construct a checklist of such categories as the following: points of law, career information, and attitudes toward youth. Once criteria were established for what constitutes an appropriate response for each category, the teacher or a colleague could observe the class the next time a police officer was present, placing a check in the correct column for each question posed by students. The checklist would provide information only about students' questions, not about their answers to questions asked by the officer or anything else.

The following discussion focuses on three types of structured observation techniques; checklists, rating scales, and structured formats.

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Checklists:

Description: Checklists can be developed for use by the teacher or by students. Checklists are flexible, since they are based directly on the performance objectives of the unit being taught. They also provide objectivity and a semipermanent record of student achievement. Checklists for use by students can be developed cooperatively, resulting in students' having to focus on the unit objectives and assume some degree of responsibility in assessing their own learning.

Sample 1: Self-respect checklist (to be completed by teacher).

Student's Name: John Smith

Check ( ) if observed.

( ) 1. Sets goals for self (without teacher solicitations).
( ) 2. Seeks help when needed (from teacher, aide, or other student).
( ) 3. Assumes responsibilities at school.
( ) 4. Fulfills accepted responsibilities on time.
( ) 5. Corrects his/her own work reliably.
( ) 6. Uses time wisely.
( ) 7. Keeps self well-groomed.
( ) 8. Is courteous.
( ) 9. Is eager to lead the group in discovering new knowledge.
( ) 10. Responds positively to constructive criticism and suggestions.
( ) 11. Cleans his/her desk and floor area on own initiative.
( ) 12. Exhibits positive social behavior (leader or participator).

Sample 2: Checklist for police unit (to be completed by teacher).

Names of Students

Behavior to be observed	Ada Alda	Billy Budd	Carl Crewed	Donna Deeman	Earl Early	Fenton Fogg	Greta Gripe	Henry Heep	Ike Ikes	Joan Jumper
1. Brings in newspaper article related to police.										
2. Selects one of the books about police from library or reading table.										
3. Willingly volunteers for one of five optional work groups preparing room display on police.										
4. Fulfills responsibility in work group.										
5. Works cooperatively with others.										
6. Asks questions of policeman and other guests during their visit.										
7. Keeps notebook throughout unit.										
8. Actively participates in class discussion.										

*Check each child three times during this unit.

Sample 3: Student checklist.

Name Penny Ponder Unit Police

1 – Outstanding
2 – Very Good
3 – Satisfactory
4 – Needs Improvement

Week		1	2	3	4	5
1	I participated in class discussions.					
2.	I asked questions of Officer McKinney and other guest speakers.					
3.	I did not interrupt others when they were talking.					
4.	I brought news clippings for the bulletin board.					
5.	I volunteered for a work group.					
6.	I did my share of work in my group.					
7.	I read a library book about police work.					
8.	I kept my notebook up-to-date.					

Treatment of Results. Using a checklist allows a teacher to quickly calculate the number of times students exhibit the behaviors of interest. Totals for each student can be computed and the results compared at various points during the school year. These comparisons will reveal any changes over time.

Advantages: Checklists are useful in evaluating those skills that can be divided into a series of clearly defined, specific actions. They can serve as a convenient method of recording evidence of growth toward specific learning outcomes.

Disadvantages: Use of checklists is susceptible to respondent bias. Checklists do not indicate the degree of behavior, simply its presence or absence. Checklists are not useful in summarizing a teacher's general impressions concerning the personality and adjustment of pupils. They can also be cumbersome to use with a full class of students.

Rating Scales:

Rating scales are another type of structured observation instrument. These scales focus upon specific issues and require assigning a score to students' behavior or comments. For example, a teacher who wants to assign letter grades to students on the basis of the quality of their comments in class discussions might devise the following rating scale: asks thoughtful/thought-provoking questions, asks factual questions, asks questions unrelated to the topic. Scale points can be described in varying detail and need not necessarily be the same for all questions. They may change depending upon the nature of information sought. The example below indicates a different scale than the one described above.

Sample:

Student: *John Smith*
Scale Points: 1 — Excellent
2 — Good
3 — Average
4 — Fair
5 — Poor

1. **How would you rate the student's ability to get along with his peers?**
   1 2 3 4 5
2. **How would you rate the student's creative potential?**
   1 2 3 4 5
3. **How would you rate the student's attitude toward the general school environment?**
   1 2 3 4 5

Treatment of Results. Numerical values can be assigned to each point on a rating scale, allowing averaging of class scores. A comparison of these averages as well as individual scores at different times permits rapid analysis of class and individual change.

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Advantages: Rating scales provide a common frame of reference for comparing all students on the same set of characteristics. They also provide a convenient method for recording observers' judgments.

Disadvantages: Many observers exhibit a tendency to rate all individuals at approximately the same position on the scale. In addition, the rater's general impression of a person may influence how he/she rates that person on individual characteristics. Characteristics may be rated as more or less alike than they are because of the rater's belief concerning their relationship.

Formatted Observation Systems:

Formatted observation systems are tightly structured observation methods that attempt to measure the presence of certain behaviors. For example, a teacher interested in the degree to which he/she uses certain questioning strategies might construct an observational format with the following key: factual - F; inferential - I; synthesis - S; analysis - A; evaluative - E. The observer would record the appropriate letter each time the teacher asked a question which fit one of these categories.

Sample: Interaction analysis observation system.

TEACHER TALK

Direct Influence

1. ACCEPTS FEELING: accepts and clarifies the feeling tone of the students in a nonthreatening manner. Feelings may be positive or negative.

2. PRAISES OR ENCOURAGES: praises or encourages student action or behavior.

3. ACCEPTS OR USES IDEAS OF STUDENT: clarifies, builds on, or develops ideas suggested by a student.

4. ASKS QUESTIONS: asks questions about content or procedure with the intent that a student answer.

Indirect Influence

5. LECTURES: gives facts or opinions about content or procedure.

6. GIVES DIRECTIONS: gives directions, commands, or orders with which student is expected to comply.

7. CRITICIZES OR JUSTIFIES AUTHORITY: makes statements intended to change student behavior or explain why the teacher is taking a particular action.

STUDENT TALK

8. RESPONSES: makes a predictable response to the teacher.

9. INITIATION: initiates talk, introduces new ideas, or makes unpredictable response to teacher.

10. SILENCE OR CONFUSION: pauses, periods of silence, and periods of confusion in which communication cannot be understood by observer.

No scale is implied by the numbers. They are merely classificatory, designating a particular kind of communication.

Treatment of Results: After a formatted observation has been completed, the total number of behaviors can be calculated for each dimension measured by the form. Repeated use of the same form allows comparison of results, which will reveal any changes in student or teacher behaviors.

Advantages: Formatted observation systems provide a systematic method of observing and recording behavior. A large sampling of behavior is possible, and the data obtained can be analyzed statistically. These systems are adaptable to the situation being observed.

Disadvantages: Data gathered through this method may be unreliable unless the observers are highly trained. The observer's bias may be reflected in recording behavior. A large amount of data is required, and the procedure may be difficult to use with large groups.

III. ANALYSIS TECHNIQUES

A. Student Work

Description: Analysis of student work provides another technique for assessing student progress in a variety of dimensions. Homework, classwork, projects, and essays can all provide valuable data for analysis.

Sample 1: Homework assignment.

Read the following case study and write answers to these questions:

1. What decision was made in this case?

2. Who supported and who opposed the decision?

3. What did people do in trying to get others' support?

Sample 2: Project assignment.

In a group of four students, plan and enact a situation in which a cement mill has been forced to lay off 10 percent of its workers because of environmental hazards. The roles depcited will include the company president, a union leader, a worker, and an environmental protection advocate from the community.

Treatment of Results: In using these sources of information, the analyst must establish consistent criteria to be applied. For example, if students are writing an essay about how they--as police officers--would handle an anonymous tip about a crime, the grader should have clear criteria about the regulations governing search and seizure. When evaluating any student work, criteria should be used; if grades are given, the criteria necessary to achieve each grade should be clearly stated.

Advantages: Analysis of student work can provide precise information concerning what students know or do not know, can do or cannot do, as they are learning. It permits teachers to evaluate tasks requiring more time than a normal class period allows. Evaluating student projects can provide information concerning cognitive, nonverbal, and social learning for an individual or group of students. Some variables can be controlled for in-class projects.

Disadvantages: Analyzing and interpreting the work of every student in the class is time consuming. Many variables cannot be controlled, and determining how or why learning occurred is difficult.

B. School Documents and Records

Description: School documents and records can provide yet another valuable source of information about students. For example, law-related education program personnel may be interested in the impact of the program upon the citizenship behaviors of participating students. School records could provide information about referrals to the office, unexcused absences, and tardies which might be indicators of civic behavior.

Treatment of Results. Some records can easily be converted to numerical data while others, such as written comments by former teachers, may require qualitative analysis.

Advantages: School records are both systematic and longitudinal.

Disadvantages: Privacy considerations may restrict access to records. Individual maturation and other variables may account for changes from one year to the next.

IV. TESTING

A. Teacher-made Tests

Description: The teacher-made test is probably the evaluation device most commonly used in appraising the success of law-focused education programs, both at the classroom and the district levels. While most teachers construct and administer their own tests, few have had the benefit of any training in this area. This section contains some general principles regarding the construction of teacher-made tests, with specific attention to simple recall or completion, alternative-response, multiple-choice, matching, and essay items.

The well-constructed test possesses the basic characteristics of validity and reliability. Validity refers to the extent to which a test covers the material that was taught and the extent to which it measures the actual achievement of performance objectives. Thus, if the performance objectives for a unit specified the use of complex thinking abilities, a test that only measured recall would not be valid. In short, a valid test measures what it is supposed to measure. Reliability refers to the extent to which a test provides consistent results in successive uses.

A test should also be written at the reading and complexity level appropriate to the particular group being tested. If the reading level is too high, the resulting poor scores are due to reading difficulty rather than lack of knowledge of the content. If a teacher is unsure about the appropriateness of the readability level, it is best to read the test aloud to the students.

All directions on a test should be brief and simply worded. All questions should be written in a similar fashion, avoiding direct quotes from a textbook or misleading questions. The former encourages rote memorization and the latter encourages students to guess. While these general principles are important to consider in constructing all tests, a number of specific guidelines should be kept in mind for special types of items.

Simple recall items measure a pupil's ability to remember important names, events, dates, or concepts. Such items are usually written as short questions followed by blanks for the students' responses. Care should be taken to ensure that there is only one correct answer.

Sample 1:

Who was the Chief Justice of the U.S. Supreme Court at the time the Marbury vs. Madison case was heard? _____

Completion items are similar to simple recall items in that they are questions followed by blanks for the students to fill in. To avoid giving clues to the answer, blanks of uniform size should be used and use of "a" or "an" before blanks should be avoided. No more than two blanks should be left in any statement.

Sample 2:

An appeal to the court to see if a person is being illegally held in jail is called _____.

Alternative response items can be written in a variety of forms, such as true/false, yes/no, or right/wrong. This type of item should be used when there is a choice of only two responses. Specific determiners such as always, never, all, and none should be avoided. Most students can easily infer that such items are false. Having pupils write a T or an F for an answer should also be avoided; it is surprising how similar the two can be made to look. Scoring can be made easier by placing all blanks either at the left or the right side of the page. Alternative response items are especially useful for evaluating learning at lower levels of the cognitive domain, as well as in appraising stereotypes and misconceptions.

Sample 3:

_____ The U.S. Supreme Court has held that juveniles have a right to trial by jury.

Multiple-choice items consist of two parts: an incomplete or stem statement and several possible answers. Of the possible responses, one is the correct, or the best, response, and the others are distractors.

When constructing multiple-choice items, the major portion of the statement should be placed in the stem rather than in the answer choices. Possible answers should be plausible and of approximately the same length. Absurd responses and exceptionally long or short responses will tend to help students easily eliminate some of the choices.

Multiple-choice items are probably the most widely used of all test items. Although they are time-consuming to construct, they are quickly, easily, and objectively scored. They can be written to measure various levels of learning in the cognitive domain and are appropriate for use in elementary schools as well as in secondary schools.

Sample 4:

The significance of the Brown v. Board of Education decision was that it

_____ A. liberated schools from local control.
_____ B. struck down the "separate, but equal" doctrine.
_____ C. called for immediate busing to achieve racial balance.
_____ D. brought a quick end to all types of segregation.

Matching items can be used to evaluate students' abilities to associate such items as terms and definitions and principles and definitions. A teacher can provide clear directions that include the basis on which the matching is to take place. In writing matching items, items in each column should be homogeneous. There should be more responses in the second column than in the first column, thus preventing pupils from using a process of elimination to find the correct answers.

Sample 5:

Directions: Match the following items.

_____	Provides for right of women to vote	1.	First amendment
_____	Provides for freedom of speech & press	2.	Second amendment
_____	Provides for protection against self-incrimination	3.	Fourth amendment
		4.	Fifth amendment
_____	Provides for right of eighteen-year-olds to vote	5.	Sixth amendment
		6.	Eighth amendment
_____	Provides protection against cruel and unusual punishments	7.	Nineteenth amendment
		8.	Twentieth amendment
_____	Provides freedom from unreasonable search and seizure	9.	Twenty-fifth amendment
		10.	Twenty-sixth amendment

Essay items are very useful for measuring analytical, synthesizing, and evaluative skills. They are also useful in appraising students' ability to organize and summarize information and to apply concepts in a new situation. They are also useful in measuring attitudes toward controversial issues and ideas. The advantages of the essay item include providing more freedom for students to express their individuality and imagination. In addition, essay questions are more easily and quickly prepared than are others. Disadvantages include the time and difficulty involved in scoring the answer, as well as the limited coverage of the content. Care should be taken that students do not experience undue difficulty with writing and grammar.

A teacher can overcome some of the drawbacks of essay questions by restricting their use to learning outcomes that cannot be readily measured through other types of items. Each question should clearly identify the students' task and should indicate the approximate expected length and the time allowed to complete the answer.

Sample 6:

Write one or two paragraphs describing the similarities and differences between the vigilante trial of Henry Plummer and a legal court trial. Focus especially on judicial procedures and rights of the accused.

Treatment of Results: Teacher-made tests are usually graded and assigned a numerical score, often a percentage of correct responses. A review of these scores will indicate how well the class as a group performed on the test. It will also provide an indication of how well individual students achieved the objectives measured by the test.

Advantages: Teacher-made tests can be constructed to address the specific objectives of a program and can be adjusted to the level of students.

Disadvantages: Teacher-made tests are often poorly constructed. Frequently there is no opportunity to check for reliability or validity.

B. Standardized Tests

Description: A wide array of commercially available tests have been developed. Some of these have been developed in conjunction with specific curricular materials, while others attempt to measure achievement generally. National, state, and local LRE projects often have tests related to their specific project objectives. Some of these tests have been subjected to rigorous statistical analysis, while others have not. If a teacher can locate a reliable and valid test that measures the goals of his/her program, using that test is much easier than developing a good one. Unfortunately, teachers are often unable to find a test that addresses the same objectives as their programs. Selecting appropriate items from several instruments may be possible, however. When developing or selecting a test, it is critically important that each item included be specifically tied to an objective; if this is not true, results may be poor.

Treatment of Results: Numerical scores are almost always assigned for standardized tests. These scores can be compiled to produce a class profile. In addition, standardized tests can provide information about how well individuals and classes did on the test compared to other students throughout the country.

Advantages: Administration and scoring instructions are usually provided with standardized tests. The test is clearly defined and can measure cognitive achievement, aptitude, interest, and a variety of personality traits. Information from standardized tests has known parameters, such as average performance for various groups and validity and reliability estimates. Standardized tests can be used to compare one's students with others in the nation. The resulting data can be used to assess program impact.

Disadvantages: Standardized tests may address objectives that are different from the individual teacher's. Locating appropriate tests may be difficult, and the costs may be unfeasible. Administering, scoring, and interpreting the results of standardized tests are sometimes complicated.

ACTIVITY 8:
INDICATORS AND TECHNIQUES

Introduction: Participants are now ready to apply the ideas and information learned in the previous two activities to their own LRE projects. The second page of the "LRE Project Management and Evaluation Form" is used to help participants determine indicators related to their project objectives and to select appropriate techniques for gathering data on those indicators.

Objectives: Participants will be able to--

1. Identify the indicators of achievement related to each of their project objectives.
2. Select appropriate evaluation techniques for gathering data on each indicator.

Time: 2-3 hours

Materials Needed: Handouts 2 and 12, newsprint and marking pens

Procedure:

1. Introduce this activity by distributing copies of Handout 12, "LRE Project Management and Evaluation Form: Page 2 Illustration." This handout provides an example of a completed form on which indicators and techniques are specified and related to each other. State that this is an example of what participants will produce from their project work. Ask participants to state whether they feel that the particular techniques selected on this sample form are the most appropriate for the given indicators. Participants may have some minor criticisms, but generally these are appropriate techniques.
2. Tell participants to complete their blank copies of page 2 of the "LRE Project Management and Evaluation Form" (distributed in Activity 2) for their projects. State that they will also need to refer to their completed forms on objectives and activities (page 1 of this form). Suggest that they also reread the evaluation strategies and instrument sections of the evaluation model.

3. Circulate and provide help as needed during this work session. As groups complete a section of this form, check their work to make sure they are making the most appropriate selections and are writing them clearly.

4. Conclude this session one of two ways. If the group is small, ask each project to present their completed forms (either duplicating copies or placing them on poster paper) to the full group for comments. If the group is large, ask participants to identify problems that arose during the work session and important points to keep in mind when completing this form.

LRE PROJECT
MANAGEMENT AND EVALUATION FORM:
PAGE 2 ILLUSTRATION

	INDICATORS		EVALUATION TECHNIQUES
1.11	Teachers' knowledge about the existence and nature of the Street Law, Constitutional Rights, and Law in a Free Society materials and activities.	1.111	Short-answer completion test on a pretest/posttest basis.
1.12	Teacher perceptions of the usefulness of the workshop.	1.21	Workshop evaluation form (rating scales and open-ended items) on posttest basis.
2.11	Teacher behavioral performance in using the case studies, role plays, media, mock trials, community involvement, and discussion strategies in the LRE materials.	2.111	Observation analysis form used during practice sessions and classroom teaching.
2.12	Teacher perceptions of the usefulness of the workshop.	2.121	Workshop evaluation form (rating scales and open-ended items) on a posttest basis.
3.11	Student knowledge about the functions of law, criminal justice, civil law, and constitutional rights.	3.111	Multiple-choice test on a pretest/posttest basis.
3.12	Student attitudes toward the police, the courts, constitutional rights, and the need for law.	3.121	Likert-type attitude survey on a pretest/posttest basis.

ACTIVITY 9:
USING LIKERT SCALES TO EVALUATE
STUDENT ATTITUDES IN LRE

Introduction: Likert scales and surveys are one very useful and efficient way of measuring attitude change in students or teachers. While this technique is frequently used in education, including LRE, it is not commonly used correctly. Developing a good Likert attitude survey involves careful application of several principles. This series of activities is designed to teach participants those principles and skills so they can develop good surveys for use with their LRE projects. The skills taught can also be applied to evaluating existing attitude surveys and modifying them to fit the needs of particular projects.

Objectives: Participants will be able to--

1. Identify the specific attitude scales underlying a set of Likert items.
2. Evaluate a set of individual Likert items by applying a specific set of criteria.
3. Identify appropriate and inappropriate uses of Likert surveys.
4. Describe and illustrate several different types of response formats for use with Likert surveys.
5. Develop a Likert scale for LRE attitudes and write a set of Likert items for it.

Time: 3 hours

Materials Needed: Handouts 13-17, newsprint and marking pens or chalkboard and chalk

Procedure:

1. Point out that this session will not involve (a) writing 500 behaviorally stated affective objectives, (b) learning any complex statistical procedures, (c) discussing the theoretical aspects of attitude measurement, and (d) using various methods of measuring attitudes. Stress that these are all worthy activities, but that this session will

focus on more manageable objectives: (a) learning to use one very useful and reliable (though not perfect) method of measuring student attitudes--Likert scales and (b) working individually and in small groups to analyze, evaluate, and develop Likert scales.

2. Provide working definitions for the following terms: (a) attitude--a set of beliefs or feelings focused on a specific object or situation; (b) Likert item--an example is provided rather than a precise definition: "This has been a very worthwhile conference"

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

(c) Likert scale--A collection of Likert items designed to measure a specific attitude; (d) Likert-type attitude survey--A collection of several Likert scales designed to measure various specific attitudes toward a common subject. Distribute Handout 13, "Juvenile Justice Classroom Poll," stating that it is an example of a Likert-type attitude survey developed as an instructional tool rather than an evaluation instrument.

3. State that good attitude surveys are not comprised merely of 40 separate items, but of carefully constructed sets of items designed to measure well-defined scales. Distribute copies of Handout 14, "Political Attitude Scale," which includes sections of a political attitude survey developed for high school social studies curriculum. Ask each participant to match the 16 Likert items with the four scales they were designed to measure (Sense of Political Efficacy, Political Trust, Egalitarianism, and Governmental Support). Go over the answers and discuss problems encountered in doing this exercise. For your convenience, the answers are provided below:

1. C	9. C
2. D	10. A
3. B	11. B
4. A	12. C
5. A	13. A
6. C	14. B
7. D	15. D
8. D	16. B

4. Tell the participants to divide into groups of three. Distribute copies of Handout 15, "LRE Attitude Survey," which contains 16 Likert items drawn from several LRE surveys. No definitions of scales comprising the survey are provided. Tell the groups to infer the four scales which those 16 items seem to measure. Go over the answers with the whole group. Provide the scales which the developer of the instrument intended to measure with those items (provided below) and briefly summarize the main point to be derived from these last two activities.

1. Support for constitutional rights
2. Respect for law
3. Support for constitutional rights
4. Attitudes toward police
5. Respect for law
6. Attitudes toward police
7. Support for constitutional rights
8. Respect for law and support for constitutional rights
9. Attitudes toward police and support for constitutional rights
10. Attitudes toward police
11. Respect for law
12. Support for constitutional rights
13. Attitudes toward police
14. Respect for law
15. Attitudes toward police
16. Support for constitutional rights

5. Discuss the following critical question: What are the appropriate and inappropriate uses of Likert-type attitude surveys? The following points should be made:

--Inappropriate uses: (a) Likert-type surveys are frequently not a reliable way to determine attitudes or attitude change of individuals, (b) they should definitely not be used for grading students, and (c) if honest responses are desired, students should not place their names on the survey form.

--Appropriate uses: (a) Well-constructed and tested Likert-type attitude surveys can be very efficient, direct, and reliable instruments for assessing attitude changes in groups (e.g., a class, all social studies classes, or some of the sample of students), and (b) this method

is especially effective for determining pre/posttest changes for the purpose of evaluating curriculum programs and planning for instruction.

6. State that a good Likert survey must also include well-written individual Likert items. Distribute Handout 16, "Evaluating Likert-type Items." Go over the first page, which provides a set of criteria or characteristics of well-written Likert items, explaining and illustrating each of these criteria. Now direct participants to page 2. In their groups, participants should evaluate this set of 12 Likert items drawn from various LRE instruments by applying the criteria to each item. Go over the correct answers with the full group. For your convenience, possible answers are provided below:

1. 4 (use of "can be" makes the statement ambiguous)
2. 5 (statement is too general)
3. 5
4. 3 (this item does not present an attitude that differentiates among groups)
5. Good item
6. 4
7. 4
8. 5
9. 5
10. 2
11. 4
12. Good item

7. State that a variety of response formats for Likert items are possible. Distribute Handout 17, "Response Formats for Attitude Scales," and discuss the following points: What formats are most appropriate for elementary and secondary students? How many response choices are best? Should a midpoint be used? The following points should be brought out during the discussion:

--Number of points: Although there are no absolute rules, the following seem most appropriate for each grade level: primary grades--2-3 choices; intermediate and middle school--3-5 choices; secondary--4-7 choices. Having more response choices than suggested here usually increases the difficulty for respondents without producing more useful data.

--Midpoint: Again there is no absolute rule. Including a midpoint will allow some respondents to avoid thinking about their opinions, but the midpoint may accurately reflect some respondents' views. Not including a midpoint can arbitrarily force respondents to one side or the other or can encourage them to leave items blank. Inclusion of a midpoint may also have some effect on data analysis, especially as it relates to interval and ordinal scales (see Activity 14 for more information on this issue). Generally, use of midpoints is a matter of preference, but the point should be clearly defined so that the results can be accurately interpreted.

8. State that by applying the knowledge and skills gained from the previous activities, participants are now prepared to create their own Likert scales to measure student attitudes related to their LRE programs. Identify some of the LRE attitudes with which the workshop has already dealt. Ask participants to brainstorm other attitudes that might be important to assess. This is done merely to stimulate participants to think about the types of attitudes on which to focus their development efforts.

9. Ask participants to select a specific LRE attitude (e.g., attitude toward police), define several aspects of that attitude, define a scale for that attitude, and create eight or ten items and a response format which will measure that attitude in either elementary or secondary students. Participants can do this activity individually or in small groups depending on their preference. Circulate to help participants through the various steps and to answer questions.

10. Have several persons or groups then share the scales and one or two items. If time and materials are available, this can be done on poster paper or on overhead transparency. If not, the sharing can be done orally. Conclude by conducting a brief discussion of problems encountered in developing items.

JUVENILE JUSTICE CLASSROOM POLL

After reading each of the statements below, mark the appropriate letter(s) in the blank space which most accurately reflects your opinion of the statement. There are no right or wrong answers.

SA-*Strongly Agree*	A-*Agree*	U-*Uncertain*	D-*Disagree*	SD-*Strongly Disagree*

___ 1. Police get criticized too often by young people for just trying to do their jobs honestly and fairly.

___ 2. Parents should be held legally responsible for the actions of their children, whether in school or out.

___ 3. In our justice procedures, the distinction between juveniles and adults works to the advantage of young people by shielding them from the brutal aspects of the system.

___ 4. The existence of juvenile detention centers, reform schools, and prisons discourage or deter young people from committing crimes.

___ 5. There should be a set penalty for each youthful offense with little or no discretion left to the juvenile judge as to what the sentence should be.

___ 6. Shoplifting is just a matter of "ripping off" the establishment; therefore, shoplifters should *not* be prosecuted to the fullest extent of the law.

___ 7. A juvenile should be given a trial by jury for any offense for which an adult criminal would be tried.

___ 8. When you get right down to it, your chances of receiving justice are determined almost entirely by your age, sex, color, and wealth.

___ 9. Students should be financially responsible for replacing damaged property.

___10. Students should be required to "work off" any damage done to school property (example: cleaning desk tops, cleaning lavatory walls, etc.)

___11. Students should report to the office any individuals that they see committing an act of vandalism.

___12. Students commit most acts of vandalism because they want attention from their friends.

___13. Most young people who get caught in delinquency really want to be discovered and helped.

___14. Some element of punishment should be a part of any good corrections/rehabilitation program.

___15. If parents and teachers would only be more strict, young people would grow up respecting law and authority.

___16. The personality and behavior of a child is determined by the atmosphere within his home and the roles his parents play in discipline and setting standards of conduct.

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POLITICAL ATTITUDE SCALE

Directions: The attitude survey on the next page is comprised of the four subscales explained below. Match the items on the survey to the subscales by placing the letter corresponding to the appropriate subscale in the blank beside each item.

A. Sense of Political Efficacy--feeling that the individual can influence political decision making. Individuals with a high sense of political efficacy believe that they have a voice in what the government does. They believe that the government is responsive to their interests and needs.

B. Political Trust--absence of political cynicism. Political trust means positive supportive attitudes and beliefs about political leaders and the political system. Individuals with high political trust believe that government officials are honest and competent. They believe that public officials desire mainly to serve the people that they represent rather than themselves.

C. Equalitarianism--support for social or welfare democracy. An individual who is high in equalitarianism supports public policies that would ameliorate or eliminate impoverished living conditions. An individual who is high in equalitarianism supports action by the government to equalize opportunities for individuals to enhance their style of life.

D. Governmental Support--willingness to favorably evaluate the Presidency, the Congress, and the Supreme Court. A person with a high score on this scale has positive feelings about these institutions. He or she is supportive of the present working of the Presidency, the Congress, and the Supreme Court.

Adapted from Howard Mehlinger and John Patrick, American Political Behavior (Bloomington, Indiana: High School Curriculum Center in Government, University of Indiana, 1969). Used by permission.

Key: A = Sense of Political Efficacy C = Equalitarianism

B = Political Trust D = Governmental Support

_____ 1. The government ought to make sure that everyone has a good standard of living.

_____ 2. Congress has done a good job and should not be drastically changed.

_____ 3. Almost all of the people running the government are smart people who usually know what they are doing.

_____ 4. Public officials do not care much about what people like my parents think.

_____ 5. People like my parents can have an influence upon the government by joining groups of people (interest and pressure groups) that support the same political ideas.

_____ 6. Money should not be taken from richer people through taxes in order to provide services for poorer people.

_____ 7. Congress has been too slow in dealing with the major problems of the United States.

_____ 8. The president has become too powerful and should have his powers reduced.

_____ 9. All people should have good houses, even if the government has to build them.

_____ 10. Political parties are so big that the average member has little or no influence on decision making.

_____ 11. Most of the people running the government are a little crooked.

_____ 12. If poor people cannot afford to pay for health care, the government should pay their hospital and doctor bills.

_____ 13. What the government does is like the weather: there is nothing people can do about it.

_____ 14. There is almost no connection between what a politician says and what he or she will do when elected.

_____ 15. When the president of the United States makes a decision, it is the duty of the people to obey him.

_____ 16. People in the government waste a lot of the money we pay in taxes.

LRE ATTITUDE SURVEY

1. If a person is suspected of a serious crime, the police should be allowed to hold him/her in jail until they can get enough evidence to officially charge him/her.

2. Without rules many people would act less responsibly than they do now.

3. At their trials, suspected criminals should have the right to refuse to answer questions if they feel their answers may be used against them.

4. Most police officers like to tell people what to do.

5. Until they are changed, even unfair laws should be obeyed.

6. Most police officers enjoy protecting and helping people.

7. Students should be allowed to look at and challenge their school records.

8. It is important to have laws which prevent innocent people from going to jail, even though some guilty persons may go free.

9. Local police may sometimes be right in holding persons in jail without telling them of any formal charges against them.

10. Police officers seldom make good neighbors.

11. Ignorance of the law is no excuse for violating it.

12. Employers should hire anyone who is qualified for the job, regardless of race, creed, or religion.

13. Today, when police question people, they use fair methods.

14. It is all right to break the law if you do not get caught.

15. Most police officers treat all people alike.

16. Some criminals are so bad that they should not be allowed to have a lawyer.

A Potpourri of LRE Attitude Items

Directions: Evaluate each item below using the guidelines given on the previous page. In the space beside each item, write "good" if you believe the item meets all the criteria; if the item violates one or more of the guidelines, write the guideline number(s) in the space.

_____ 1. Special courses about the legal system can be very helpful to junior and senior high school students in learning about their government. (LRE attitudes)

_____ 2. Police have too many powers today. (Police authority)

_____ 3. People should not be allowed to march on public streets. (Political tolerance)

_____ 4. Protecting everyone's rights is important. (Constitutional rights)

_____ 5. Most lawyers are more interested in making money than in protecting people's rights. (Attitude toward legal community)

_____ 6. The right to privacy should be protected because it is a constitutional right and some police might abuse the opportunity to make unlimited searches. (Privacy)

_____ 7. Everyone should obey laws in order to avoid punishment and to keep society functioning smoothly. (Respect for law)

_____ 8. Police patrol my neighborhood carefully. (Respect for police)

_____ 9. Judges protect our rights. (Constitutional rights)

_____ 10. Others' thoughts of one's political actions are of no importance. (Political tolerance)

_____ 11. People have a right to engage in unusual or unpopular acts without criticism or punishment. (Constitutional rights)

_____ 12. Women should have the same rights as men. (Equality before the law)

RESPONSE FORMATS FOR ATTITUDE SCALES

Elementary Level (Two or Three Choices)

YES	NO
Like Me	Unlike Me
Agree	Disagree
+	0

YES	?	NO
Like Me	?	Unlike Me
Agree	Don't Know	Disagree
+	?	0

Secondary Level (Four or Five Choices)

Definitely Yes Probably Yes Probably No Definitely No

Strongly Agree Agree Disagree Strongly Disagree

Hardly Ever Occasionally Frequently Very Often

Definitely Yes Probably Yes Not Sure Probably No Definitely No

Strongly Agree Agree Uncertain Disagree Strongly Disagree

Almost daily 2-3 times a week 3-4 times a month A few times a year Never

ACTIVITY 10:

USING MULTIPLE-CHOICE TESTS TO

EVALUATE STUDENT LEARNING IN LRE

Introduction: Multiple-choice tests are one of the most frequently used methods of evaluating student cognitive learning in LRE. Well-constructed multiple-choice tests can measure conceptual understanding, thinking skills, and factual knowledge. This activity is designed to teach participants the basic principles of constructing multiple-choice test items for these purposes. Participants first examine and evaluate existing items and then develop their own items using the specified criteria.

Objectives: Participants will be able to--

1. Classify each item in a set of multiple-choice items as measuring cognitive knowledge, conceptual understanding, interpretation skills, or attitudes/values.
2. Evaluate a set of multiple-choice items by applying a specific set of criteria.
3. Develop a set of multiple-choice items for their LRE programs using the principles demonstrated.

Time: 2 hours

Materials Needed: Handouts 18-21

Procedure:

1. Introduce the activity by stating that multiple-choice tests can be a very useful and efficient method of evaluating student cognitive learning in LRE. State that while most tests measure only factual knowledge, items can be developed to measure conceptual understanding and interpretation skills as well. Explain and illustrate the difference between these three types of learning.
2. Distribute copies of Handout 18, "Classifying LRE Test Items," asking participants to complete the exercise as indicated in the directions. Participants must classify a set of items using the three cate-

gories defined in step 1 and the category attitudes/values. This last category is used to illustrate that tests designed to assess cognitive learning often inadvertently include attitude items.

3. Go over the participants' answers item by item, providing the answers given below for discussion:

1. CK	8. CK
2. CK or CU	9. CU
3. CU	10. CU
4. AV	11. CU
5. IS	12. CK
6. AV	13. CU
7. AV	14. AV

During the discussion, point out that some items can be classified in two or three ways. One factor affecting the way in which items are classified is the nature of the LRE instructional program. If information is provided directly in the instructional program, an item that on the surface appears to be testing conceptual understanding may actually be testing only factual recall. Stress that some of the items are attitude items; unlike their cognitive counterparts, these items do not have universally agreed-upon correct answers. Such items do not belong on a cognitive test; they should be separated and labeled as opinion or attitude questions. Students should not be graded on their responses to these questions.

4. Summarize the main differences between the three types of cognitive learning using Handout 19, "Examples of Good Multiple Choice Items."

5. State that the most important criterion for a good test item is that it measures the specific cognitive objective that it is intended to measure. Stress the importance of clearly defining the particular cognitive objective. (This is similar to defining the specific attitude scales in the previous set of activities on Likert surveys.) Ask participants to brainstorm a list of main LRE content areas (e.g., civil law, criminal law, etc.) and identify the main features or content in each area.

6. Distribute copies of Handout 20, "Evaluating Multiple-Choice Items." Explain and illustrate each guideline.

7. Ask participants to work in groups of two or three to complete the worksheet as described in the directions. Note that the intended answers to the items are provided on the worksheet, as are the areas of law to be tapped by the item. This information is needed to apply the guidelines.

8. Go over the worksheet with the full group, using the answers suggested below to stimulate discussion:

1. 4 (The foils are much briefer than the correct answer and c is too obviously wrong.)
2. 2 (The stem does not give a clue to what is desired. A better stem would be: "What is the main purpose of laws?")
3. Good item
4. 3 (Some may argue that a is more effective in some situations.)
5. 1 (The phrase "all but which of the following" is awkward and may confuse students.)
6. Good item
7. 3, 5, and 6 (The stem does not indicate what actions the son is debating between. Because of the vagueness of the stem, b might be a possible answer. Thus, the item is not a good one to test for the ability to identify values in conflict.)
8. 3 and 6 (This stem depends upon opinions about treatment centers rather than knowledge about them.)
9. Good item
10. Good item

9. Distribute copies of Handout 21, "Suggestions for Developing Multiple-Choice Tests" and use this to point out other key principles to keep in mind.

10. Have participants work in small groups to select a specific LRE content area and develop for that area: two cognitive knowledge items, two conceptual understanding items, and two interpretation skills items.

11. Have participants present their items to the full group for review, comments, and suggestions for revision.

12. Conclude by emphasizing the importance of creating tests that measure conceptual understanding and interpretation skills as well as factual knowledge. Also state that the principles participants have learned can also be applied in evaluating and modifying existing test items.

CLASSIFYING LRE TEST ITEMS

Directions: Read each LRE test item below and determine the kind of student outcome it is primarily measuring. Write the appropriate abbreviation in the blank next to the item:

CK = cognitive knowledge (recalling facts)

CU = conceptual understanding (applying a concept)

IS = interpreting skills (reading tables and graphs and making inferences from data)

AV = attitudes or values (expressing an opinion or belief)

SE = something else (none of the above)

____ 1. When the U.S. Supreme Court hands down a decision:

A. a lower court may overrule the decision.
B. it establishes law for the entire country.
C. it may not overrule a previous decision of the Supreme Court.
D. the decision is an example of legislation.

____ 2. Values are:

A. the same the world over.
B. different things to different societies.
C. determined by the Supreme Court.
D. based upon rules.

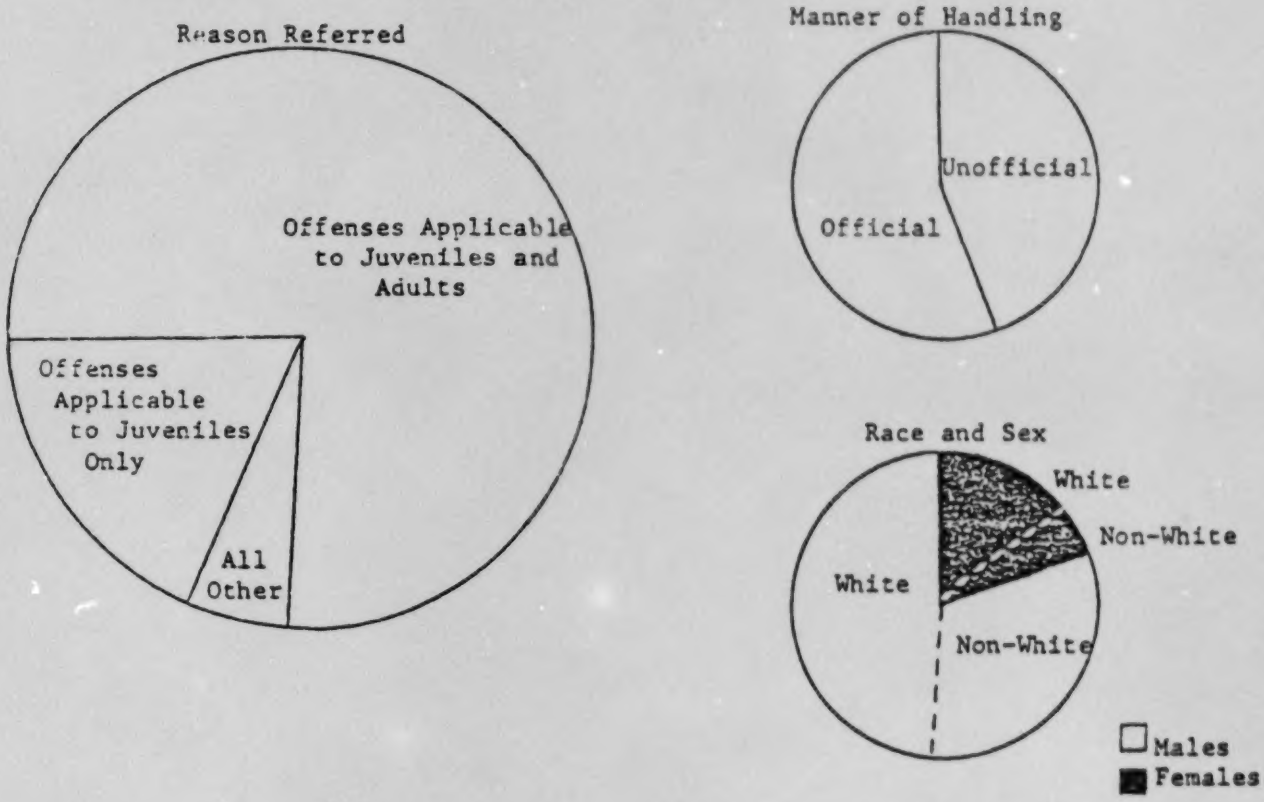
____ 3. Rules made by school boards in the United States most closely resemble those laws or rules made in:

A. a monarchy.
B. a dictatorship.
C. a democracy.
D. an anarchy.

____ 4. Vandalism is an act that shows:

A. lack of concern for property.
B. creative expression.
C. you are acting against human rights.
D. society needs to reevaluate its values.

SELECTED CHARACTERISTICS OF JUVENILE COURT DISPOSITIONS



____ 5. According to the above chart, most offenses committed by juveniles are:

A. crimes that apply only to juveniles.
B. crimes that apply to both adults and juveniles.
C. crimes against property.
D. crimes against the individual.

____ 6. When involved in a disagreement, you should protect your rights by:

A. buying a weapon.
B. resisting unlawful arrest.
C. hiring a lawyer.
D. paying an arresting officer.

____ 7. Educational programs in prison:

A. waste the taxpayers' money.
B. help prisoners adjust to free society when they are released.
C. are only necessary for high school dropouts.
D. are only used in state penitentiaries.

____ 8. Which of the following statements best describes a search warrant? It is a:

A. court order allowing a police officer to search all of your home and possessions.
B. court order allowing a police officer to search your home for only certain items.
C. police order allowing a police officer to search your home or your possessions for a certain item.
D. an official form that must be filled out after a search has been made reporting what has been found during the search.

____ 9. The basic distinction between crime and delinquency is the:

A. motive for the act.
B. age of the offender.
C. nature of the offense.
D. punishment given.

____ 10. Which of the following is the best example of judicial review operating in the federal government?

A. The Supreme Court studies Alabama's new voting law and declares that it violates the constitutional rights of blacks.
B. The President reviews the records of two court-martialed soldiers and recommends that their life sentences be made eligible for parole in five years.
C. Judge Smith of the Second District Court summarizes the legal issues in the mail fraud case and sends the jury out to decide on its verdict.
D. Congress reviews the President's military defense budget and cuts $2 million from it.

____ 11. "I'm not going to take the witness stand," whispered the defendant to his lawyer. "The prosecutor will twist everything I say to make me look guilty." What legal right is the defendant exercising?

A. Right to counsel.
B. Right to appeal.
C. Privilege against self-incrimination.
D. Privilege of habeas corpus.

____ 12. A bill was proposed on the floor of the House of Representatives, sent to committee, and returned to the House floor for a successful vote. What is the next step this bill must go through in order to become a law?

A. It will be sent to the President for his signature.
B. It will be sent to the Senate for a vote.
C. It will be reviewed by the Supreme Court.
D. It will become a law without any further steps.

ITEM BOX

1. A newspaper can print its opinion as to how well the President is doing his job.

2. A newspaper can make up an untrue story about someone and print it.

3. A newspaper may print only news approved by the government.

_____ 13. Which examples given in the Item Box show what <u>freedom of the press</u> means in the United States?

A. Item 1 only.
B. Items 1 and 3.
C. Items 2 and 3.
D. None of the items.

_____ 14. Laws are made for the health and safety of the people in a community. Should a law be made requiring all children under 10 years of age to be in bed by 9:00 p.m.?

A. No, because the law would be hard to enforce.
B. No, because parents should decide.
C. Yes, because children need more sleep than adults do to stay healthy.
D. Yes, because lawmakers know what is best for people.

EXAMPLES OF GOOD MULTIPLE-CHOICE ITEMS

Cognitive Knowledge (Recalling facts)

Example: Which of the following is the main function of the U.S. Supreme Court?

A. Making the laws.
B. Enforcing the laws.
C. Interpreting the laws.
D. Changing the laws.

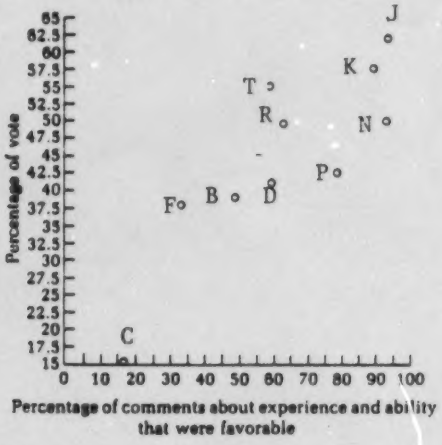
Conceptual Understanding (Applying a concept)

Example: Which of the following is the best example of a civil case?

A. A citizen sues the town council for damages resulting from a fall on a rough street.
B. Two men are arrested for selling marijuana.
C. A businessman is fined for not having the proper license to do business.
D. Parents are charged for failing to send their child to school.

Interpreting Skills (Reading tables and graphs and making inferences from data)

Example: Use the following graph on recent presidential elections to answer these two questions (note the letters refer to particular candidates).



Adapted from Educational Resources Center, American Government Issues (New York: Teachers College Press, 1981), p. 18. Used by permission. All rights reserved.

Examples of Reading Graph:

Which candidate received the highest percentage of vote?

A. C
B. F
C. T
D. J

Which of the following best describes the relationship between experience/ability and percentage of vote in these elections as depicted in this graph?

A. The greater the percentage of favorable comments about experience and ability that a candidate receives, the higher the percentage of the vote he/she will get.

B. The greater the percentage of favorable comments about experience and ability that a candidate receives, the lower the percentage of vote he/she will get.

C. Candidates with extremely large or extremely small percentages of favorable comments about their experience and ability receive low percentages of the vote.

D. There is no relationship between these two factors.

Example of Making Inferences from Data:

What campaign strategy is suggested by the relationship shown on this graph?

A. Run a lot of TV ads.
B. Get more experience and ability.
C. Get people to see you as someone with good experience and ability.
D. Focus on other factors besides experience and ability.

Note: While the two previous test items assess ability to read what is on the graph, the latter item requires students to make a reasonable leap (inference) from the data on the graph.

EVALUATING MULTIPLE-CHOICE ITEMS
Guidelines

YES	NO		
_____	_____	1.	Is the item stated clearly and simply?
_____	_____	2.	Does the stem make sense by itself?
_____	_____	3.	Is the correct answer unquestionably correct?
_____	_____	4.	Do the wrong answers represent common or reasonable errors?
_____	_____	5.	Is the item not too easy and not too difficult?
_____	_____	6.	Does the item measure the knowledge or understanding objective intended?

A Collection of Multiple-Choice LRE Items

Directions: The following LRE test items have been collected from a variety of sources. The intended correct answers are indicated by a circle. The phrase to the left of the item indicates the knowledge area the item is designed to tap. Your task is to evaluate each item using the criteria given on the previous handout.

1. If no laws existed, which of the following would likely occur?

Need for laws

A. People would probably not survive.
B. Governments would be stronger.
C. Families would move closer together.
(D.) Acts of violence and acts against property would take place for a while, but eventually people would make laws.

2. Most laws were made:

Purpose of laws

(A.) to protect the things we believe in.
B. to provide for the national defense.
C. to punish criminals.
D. to have a written record so that future civilizations will remember us.

3. Jimmy, a devilish lad of five, saw that 80-year-old Mrs. Smith was about to sit in her lawn chair. He raced over and pulled the chair away. Mrs. Smith fell to the ground, injuring her hip. Mrs. Smith sues Jimmy's father. Who is most likely to win the case?

A. Jimmy's father--Jimmy did not intend to injure the old lady, only to pull her chair out.
Civil law (B.) Mrs. Smith--Jimmy intended to pull the chair out and his family should pay for her injury.
C. Jimmy's father--parents are not legally responsible for the actions of their children.
D. Nobody--the court refuses to hear the case because Jimmy is only five years old.

4. Which of the following actions would most likely encourage young people to observe school rules?

School rules

A. Use physical punishment for violators.
B. Ignore infractions of rules.
C. Keep threatening what might happen if someone disobeys.
(D.) Compliment students for the observation of school rules.

5. Parents/guardians, by law, must provide their children with all but which one of the following:

Family law

A. Food.
B. Clothes and shelter.
C. Medical attention.
(D.) Love.

6. Which of the following is not a right, according to the current Juvenile Court Act?

Juvenile rights

A. The right to legal counsel.
B. The opportunity to introduce evidence and cross-examine witnesses.
(C.) The right to a jury trial.
D. The right not to be a witness against one's self.

7. An undercover agent promises to tell no one of his work. He finds out about a bank robbery, captures the crooks, but leaves before the police arrive so as not to blow his cover. His son sees him leaving and thinks he is an escaping crook. His son must decide between:

Value conflicts

(A.) loyalty and responsibility.
B. honesty and injustice.
C. pride and shame.
D. rules and regulations.

8. Which of the following best describes a community treatment center?

Justice system

(A.) An attempt at rehabilitation.
B. A result of prison overflow.
C. A failing of the court system.
D. An expensive shot in the dark.

9. In 1896 the Supreme Court decided in the case of Plessy vs. Ferguson that separate facilities for white and black Americans did not violate the 14th Amendment so long as the facilities were equal. This decision lent legal support for segregated schools in America.

Dynamic nature of law

In 1954 the Supreme Court reversed the decision of Plessy vs. Ferguson in the case of Brown vs. the Board of Education. The new Supreme Court ruling said that separate facilities were inherently unequal. Segregated schools were, therefore, a violation of the 14th Amendment and were unlawful. How could this complete change in the Supreme Court's decision best be explained?

A. The Supreme Court justices misinterpreted the 14th Amendment in 1896.
(B.) The 1954 decision of the Supreme Court reflected social changes in the country.
C. The laws of the United States had changed by 1954.
D. The lawyers who argued the 1954 case were better at interpreting the meaning of the 14th Amendment.

10. Mr. Johnson, a candidate for city council, was driving up and down the streets in a residential area throwing rolled and banded one-page leaflets from his car onto the driveway or lawn of each home. The leaflet encouraged people to vote for him in the coming election.

Police powers

Two police officers stopped Mr. Johnson and told him he would have to find some way to keep the leaflets from blowing or risk being arrested for littering. Mr. Johnson told the police they had no right to interfere with his freedom to distribute campaign literature in the way he wanted and continued to distribute his leaflets. What legal action could the police officers take?

A. They could impound his car and get a court order to stop Mr. Johnson from distributing any more campaign literature.

B. They could stop Mr. Johnson right then and make him pick up all of the leaflets he had already distributed.

(C.) They could arrest Mr. Johnson for littering because his right to free speech does not give him the right to litter.

D. They could confiscate the rest of Mr. Johnson's literature and force him to clean up the mess he had made.

SUGGESTIONS FOR DEVELOPING MULTIPLE-CHOICE TESTS

Suggestions for Stating Problem (The Stem)

1. The lead or stem of the item must present a single, central problem. Test for this by covering the choices and noting whether the stem, standing alone, is intelligible. Every multiple-choice item should be usable as a free-response item.

2. The stem should be stated simply and accurately and should contain all material relevant to its solution. Errors occur here primarily because of omission of a statement of assumption, because the stem is stated ambiguously, or because it has complex sentence structure.

3. In most cases the stem or problem should contain only material relevant to its solution. For example, "Johnny goes to the hardware store to buy some nails. If the price of nails is ten cents a pound, what does he pay for twelve pounds?" (Poor) "What is the price of twelve pounds of nails at ten cents a pound?" (Better)

4. The stem is better stated in direct question or in direct statement form than in an incomplete statement form, since in the latter inadvertent verbal clues may lead to the best choice.

5. The problem should be stated in positive form whenever possible. Students often respond to negative statements as though they were positive. If the item cannot be stated in positive form, underlining the negative words (e.g., <u>not</u> and <u>never</u>) can be helpful.

6. Items requiring the student to express an opinion or value judgment should, in most cases, ask for the opinion of an authority specified in the stem rather than the student's own opinion.

Suggestions for Developing Choices (The Responses)

1. The choices should be presented in logical order (e.g., numbers lowest to highest).

2. The correct choice should be placed at random among choices (no fixed pattern).

3. In elementary school, a minimum of three choices should be given; in high school, a minimum of four.

4. The correct choice should be unquestionably right; most of the time, errors are made here by not having the answer complete enough.

5. The suggested wrong choices should represent errors commonly made by students in class discussion rather than general misconceptions. The wrong choices must be wrong for a specific reason (too general, too restricted, or incomplete).

6. The suggested choices should be as brief as possible. Avoid the necessity of measuring reading skills.

7. Except in lower elementary grades, the choices should be lettered and capital letters should be used for ease of scoring.

8. Irrelevant clues should direct the student away from the right answer if he or she is unable to answer the problem. They should never direct the student to the right answer. This principle is of great importance because so many clues are given in multiple-choice items. The clues usually fall in the following categories:

    Wording in the stem and the best choice is similar.
    The key word in the stem is associated with key word in choice.
    Choices are from different or varied domains.
    Grammatical inconsistencies between stem and choices eliminate some choices.
    Not all choices are plausible.
    Choices vary in length and complexity.

ACTIVITY 11:

USING INTERVIEWS TO COLLECT

STUDENT AND TEACHER DATA

Introduction: Interviewing is a very useful technique for obtaining in-depth information from a relatively small sample. It can be an effective way to probe teacher and student attitudes and perceptions in LRE projects. It is also a good method for obtaining specific suggestions for revision of materials and activities. In order to produce valid results, however, the interviews must be planned and conducted systematically and thoughtfully. This activity, which involves the participants in role plays, is designed to teach participants the skills of successful interviewing and to point out problems that need to be anticipated and resolved.

Objectives: Participants will be able to--

1. Observe an interview and identify several positive and negative behaviors on the part of the interviewer and/or interviewee.
2. List several suggestions for ensuring that interviews are well developed and well conducted.
3. Construct a short interview form and conduct a successful interview with it.

Time: 2-3 hours

Materials Needed: Handouts 22-24, newsprint and marking pens or chalkboard and chalk

Procedure:

1. Introduce the activity by stating that interviews can be very useful ways to gather data on LRE projects, but they are not easy to develop and conduct successfully. State that this activity will focus on some common problems associated with interviews and ways to alleviate them. Also tell them that by the end of the session they will have constructed and conducted an interview related to their LRE projects.

2. Distribute copies of Handout 22, "Interview Guide for Teachers." Explain that this interview form will be used in a simulation of an LRE interview. Emphasize that this is not meant to be a model of a good form--on the contrary, it has some definite negative aspects. Explain that while the two facilitators simulate the interview, the participants' tasks are to try to write down the responses of the interviewee and to observe some positive and negative things that occur in the interview.

3. Conduct the simulated interview. (If two facilitators are not available, ask for a volunteer from the participant group and brief that person in advance.) Sometime during the role play make sure the following things occur:

--The interviewer fails to probe to get the necessary information.

--The interviewer probes too much and leads the interviewee to a response.

--The interviewer cannot write down all the information provided on an item.

--The interviewee rambles on one or two items.

--The interviewee gives a vague response.

4. Begin the debriefing by asking whether participants were able to accurately record the data obtained for each question. Distribute Handout 23, "Code Book for Interview Guide for Teachers," explaining that it illustrates the detail in which one can break down possible responses to open-ended items for tabulation and analysis.

5. Ask the participants to identify things that happened during the interview that caused problems for them. Make sure the points in step 3 above are mentioned.

6. Ask participants to identify positive and negative aspects of the interview form.

7. Distribute copies of Handout 24, "Suggestions for Developing and Conducting Interviews." Discuss each point using examples from the simulation whenever possible.

8. Divide the participants into pairs and have each pair develop a two-page interview form related to some aspect of their LRE projects.

9. Have each pair get together with another pair of participants for role plays of their interviews. One member of each pair acts as the

interviewer using their form, while the second member is the interviewee for the other group's interview. The two interviews should not be conducted simultaneously, so the two persons not directly involved in each interview can serve as observers.

10. Debrief the role plays by asking participants to identify any problems encountered during the interviews. Post and discuss these items, referring to the list of suggestions as needed.

11. Conclude the session by pointing out the advantage of using interviews for LRE projects (see the introduction to this activity).

INTERVIEW GUIDE FOR TEACHERS

Could you give be a brief history of the process by which law-related education became a part of the curriculum in your school? (INTERVIEWER: REPHRASE THIS AS SUITABLE; THE POINT IS TO GET A BRIEF RUNDOWN ON HOW LRE GOT INTO THE SCHOOL. TRY TO SPEND NO MORE THAN 3 MINUTES ON THIS QUESTION.)

_____ 11 12

_____

_____ 13 14

_____ 15 16

_____

_____ 17 18

_____

_____

(INTERVIEWER: PROBE ESPECIALLY FOR THE FOLLOWING POINTS:)

a) Who was contacted initially? _____ 19 20

_____

b) Who else became involved? _____ 21 22

_____ 23 24

c) Who were the decision makers in this process? _____

_____ 25 26

_____ 27 28

_____ 29 30

d) What factors influenced them? _____ 31 32

_____

_____ 33 34

_____ 35 36

_____ 37 38

39 40

41 42

2. Have you ever had any training in the law, other than in the sessions you have already mentioned?

_____ Yes

_____ No (SKIP TO #)

32

3. Can you tell me briefly about this training? (INTERVIEWER: FIND OUT IF ANY OF THE PROJECTS WERE IN ANY WAY INVOLVED IN THIS TRAINING.)

_____ 33 34 35

_____ 36 37 38

_____

4. To what extent has your LRE training been helpful in assisting you to develop an effective program (or class presentations)? 39

_____ Not at all
_____ A little
_____ Moderately 40
_____ A lot

5. Has your experience teaching law-related education changed your views of young persons in any way?

_____ Yes
_____ No
Explain _____ 20

_____ 21 22

_____ 23 24

6. Has your experience teaching law-related education made any difference in the way you deal with young persons or react to their behavior (either good or bad)?

_____ Yes
_____ No
Explain _____ 25

_____ 26 27

_____ 28 29

CODE BOOK FOR INTERVIEW GUIDE FOR TEACHERS

1. Could you give me a brief history of the process by which LRE became a part of the curriculum in your school?

Initial impetus to adopt LRE came from:

11 Teacher
12 Principal/building administrator
13 District superintendent's office
14 State dept. of education
15 Regional social studies specialist
16 Educators' professional organization
17 An educator's spouse
18 _____
19 _____

11 12

(CODER: CHOOSE UP TO THREE OF THE REMAINING CODES --21 through 49--TO ENTER IN COLUMS 13-18)

Local educators first learned about LRE from:

21 Educators in a nearby school
22 Educators in another district
23 Educators in another state
24 Local school board
25 Local law group
26 Judge or justice person in the community
27 Others in the community
28 _____
29 _____

13 14

31 Flyer, brochure, or letter from an NIJJDP LRE project
32 Conference or awareness session by an NIJJDP LRE project
33 Training session by an NIJJDP LRE project
34 Personal contact with staff of an NIJJDP LRE project
35 Contact with staff or materials of a non-NIJJDP LRE project
39 Other

15 16

17 18

The initial content used for LRE:

41 Was developed independently by a teacher
42 Evolved out of an existing course (e.g., consumer ed., business law)
43 Was imported from another school or district
44 Came from an NIJJDP LRE project
45 Came from a non-NIJJDP LRE project
46 _____
47 _____
48 _____

1b. Who else became involved? 21 22

(USE CODES FROM PRECEDING PAGE)

23 24

25 26

1c. Who were the decision makers in this process? 27 28

(USE CODES FROM PRECEDING PAGE)

29 30

31 32

33 34

1d. What factors influenced them?

Do not code the following platitudes:
"belief that LRE was worthwhile"
"it had something to offer"
"I/we/they liked the idea"
"they found LRE interesting"

Perceived needs:

11 Delinquency problems in the community
12 Student unrest/student riots
13 Antidote for ghetto concepts of right and wrong
14 18-year-old vote requires added emphasis on responsibility
15 Open-class structure in school requires added emphasis on responsibility
16 Improvement of school/parent relations
17 Improvement of school/community relations
18 Perceived school needs--unspecified
19 Perceived community needs--unspecified (code here if not specified as "school")

Expedience:

21 The curriculum had room for more electives
22 High-quality teachers were available
23 Teacher(s) complained of not enough to do
24 LRE seen as a device to build student interest in an existing course

Encouragement from within and outside the school:

31 Recommendation by teachers to administrators
32 Recommendation or favorable input from district
33 Recommendation or favorable input from state educators
34 Interest expressed by justice persons in the community
35 Interest expressed by others in the community
36 Student enthusiasm/student interest 35 36

SUGGESTIONS FOR DEVELOPING AND CONDUCTING INTERVIEWS

Developing the Interview Forms

Specify the information you want and why you want it.

Anticipate responses to open-ended items and begin to develop categories of answers.

Keep the forms short and concise.

Conduct pilot interviews and revise the forms.

Training for the Interviews

Train interviewers on the specific use of the forms.

Make clear to interviewers what information you want and why.

Specify exactly where and how interviewers should probe.

Conducting the Interviews

Explain the purpose of the interview to interviewee.

Assure the interviewee of confidentiality.

Give the interviewee the form before the session if possible.

Be sure to probe when necessary without leading the interviewee.

If you do not finish, set up another time immediately.

Go over your notes right after the session and clarify and elaborate as needed.

Write summaries of the interviews as soon as possible.

ACTIVITY 12:

USING OBSERVATIONS TO EVALUATE ROLE PLAYS

Introduction: Many law-related education programs use a wide variety of instructional strategies. This activity is intended to help participants consider using alternatives to paper-and-pencil tests to evaluate these strategies and to provide them with the skills needed to use structured observations to evaluate role plays.

Objectives: Participants will be able to--

1. Link instructional strategies commonly used in LRE classes to specific evaluation techniques.
2. Construct an observational instrument for use with a role play.
3. Use their observational instrument to assess a role play.

Time: 1-1½ hours

Materials Needed: Handouts 25-27, newsprint and pens or chalkboard and chalk, bag of powdered sugar, signs indicating locations in a house, and cardboard or real television

Procedures:

1. Introduce the activity by having participants brainstorm a list of instructional strategies commonly used in LRE classes. Post these on newsprint or a chalkboard.
2. Ask participants to work in groups of three or four, linking each of the strategies with several evaluation methods other than teacher-made or commercial tests. While such tests are perfectly acceptable techniques, other methods are also appropriate and may be more congruent with some LRE instructional strategies. As each group selects evaluation methods, they should also indicate the strengths and weaknesses of each. (While participants are completing this task, you may want to prepare for the role play activity which follows by setting up the props, recruiting three participants to take part in the role play, and giving them copies of Handout 25, "Directions for Role Play Participants.")

3. For each instructional strategy listed, ask one group to indicate which evaluation technique they selected, as well as the strengths and weaknesses they identified.

4. Indicate that the next step in the activity focuses upon the application of one evaluative technique--observation--to role plays. Distribute copies of Handout 26, "Search and Seizure Role Play." Ask participants what specific knowledge students could reasonably be expected to demonstrate in this role play, and how they might demonstrate that knowledge. List responses for each role.

5. Distribute Handout 27, "Observation Form for Search and Seizure Role Play," explaining that it was developed using the process the participants just completed.

6. Conduct the role play, having workshop participants complete the observation form as they watch the role play.

7. Debrief by asking participants how they evaluated each role player according to the checklist. Review the process for construction of observation instruments, and indicate that observation is an excellent method for assessing skills and knowledge but is not as effective for assessing attitudes.

DIRECTIONS FOR ROLE PLAY PARTICIPANTS

DETECTIVE HUGH BETTERLOOKOUT

You need a search warrant so you can catch Loui with the "goods." Before you can get a warrant, you must establish probable cause. An anonymous telephone call is not enough. The first thing you do is stake out Loui's place. During the three-day stakeout, you observe 27 men and women entering Loui's house with TV-sized boxes; all of this activity occurs between 3 and 6 a.m. You also observe 15 persons leaving with TV-sized boxes or uncovered television sets. This number includes one person who drove up in a TV repair shop truck and left with ten sets.

After the stakeout, present your evidence to the judge, requesting a warrant to search Loui's home, 001/2 Slippery Way. But you forget to state specifically that you want to search for missing televisions. Then present the warrant to Loui and search his home completely. Search everywhere, including dresser drawers, under the sofa, and inside his shoes, where you will find a bag of cocaine. You also find 237 televisions, 128 of which have been reported missing and are traceable through identification numbers.

JUDGE MARY GOOD OLDTIME

You need to establish probable cause before you can issue a warrant. To do that, you first inquire about the source of Hugh's original information. That source is insufficient to establish probable cause. You then ask Hugh for additional evidence. If you do not believe the evidence he offers establishes probable cause, ask whatever questions you think are necessary to determine whether probable cause exists. If you decide to issue a warrant, you need to specify the location to be searched and the approximate time of day (not between 10 p.m. and 6 a.m. unless you think Loui is dangerous). You forget to specify object of this search. You also need to specify a time limit for conduct of the search; you can give Hugh no more than 10 days.

LIGHTFINGERED LOUI

When Hugh arrives at your home, you ask to see the warrant. When you see it, you check the following:

1. Location to be searched.
2. No more than ten-day time limitation.
3. Reasonable hours of search.

You forget to check whether the objective of the search is specified. While Hugh conducts the search, be sure he confines his search to appropriate places. Protest when he looks in your shoes; the police have no reason to believe a TV might be found there.

SEARCH AND SEIZURE ROLE PLAY

OBJECTIVE: This role play will provide students with the opportunity to demonstrate knowledge of search warrant procedures, as specified for the three roles on the attached observation form.

ROLES:
Detective Hugh Betterlookout of the Woebegone City Police Department
Lightfingered Loui, alleged "fence"
Judge Mary Good Oldtime

SITUATION: An anonymous telephone caller has just informed Hugh Betterlookout that Lightfingered Loui is fencing televisions.

INSTRUCTIONS: Each participant is responsible for ensuring that the law regarding search and seizure is followed; they should thus ask whatever questions and present whatever evidence is necessary to do that. Participants should remember that the observers cannot read minds: any knowledge they have about laws regarding search and seizure should be expressed out loud.

OBSERVATION FORM FOR SEARCH AND SEIZURE ROLE PLAY

In this role play, students should be able to demonstrate knowledge of search and seizure procedures appropriate to their roles. Listed below are appropriate indicators of knowledge for each role. If the student assuming a role demonstrates a particular behavior, place a check in the D column next to that behavior. If the student has the opportunity to demonstrate that behavior but does not, place a check in the ND column. If the student does not have the opportunity to demonstrate a particular behavior (e.g., if the detective shows Loui the warrant before Loui has the chance to ask to see it), check the NOP column.

DETECTIVE (STUDENT: _____)	D	ND	NOP
1. Collects evidence to establish probable cause.			
2. Presents probable cause evidence to the judge.			
3. Requests search warrant, specifying objective of search.			
4. Presents warrant prior to search.			
5. Searches in places appropriate to the objective of the search.			

JUDGE (STUDENT: _____)	D	ND	NOP
1. Seeks to establish probable cause.			
2. Specifies location or person to be searched.			
3. Specifies no more than ten-day time limit for search.			
4. Specifies reasonable hours for search.			
5. Specifies objective of the search.			

LOUI (STUDENT: _____)	D	ND	NOP
1. Requests to see the warrant.			
2. Determines legality of the warrant by:			
a. checking location or person.			
b. checking time limits.			
c. checking hour limitations.			
d. checking appropriateness of the search.			

ACTIVITY 13:
COLLECTING DATA AND ORGANIZING FILES

Introduction: A well-designed evaluation plan and good instruments for collecting data will be of little use if the data collected are not safeguarded and organized in a way that makes retrieval easy. This activity provides a brief reading on organizing and maintaining data files.

Objectives: Participants will be able to--

1. List some important issues in establishing a data management plan.
2. Describe one method of organizing data files to facilitate data retrieval.

Time: 15 minutes

Materials Needed: Handout 28

Procedures:

1. Introduce the activity by telling the participants that the benefits of a good evaluation design and excellent instruments can be lost due to careless or ill-planned handling of data. Point out that a carefully planned data management system can help prevent loss of data, facilitate data retrieval and analysis, and ensure that all the data needed are collected.
2. Distribute copies of Handout 28, "Data Management," explaining that it provides some suggestions for organizing data files.
3. After participants have read the handout, spend a few minutes discussing its key points and their application to participants' projects.

DATA MANAGEMENT

This handout is not intended as a complete guide to the art of data management. Rather, it provides general suggestions for improving data management, along with detailed practical recommendations.

The first step in establishing an effective data management plan is to design a workable filing system. One useful way for projects to file evidence is according to the sites at which they are operating. For example, if a project is working at three high schools, a data file should be created for each; test results and other data from Rocky Mountain High would then be filed under that school.

Within each site file, documents should be organized according to project goals and objectives. A separate file should be set up for each project goal at each site. General project goals may need to be further refined to indicate the implementation objectives that must be achieved in order for the project to accomplish a particular goal.

Another useful strategy is creating a data log for each site file. Each log sheet should be labeled clearly by site and should include space to enter the following information for each document filed: document number, document title, and the research goals and objectives to which the document applies.

As documents are collected, they should be coded by site, assigned consecutive numbers, and related to a project goal or objective. For example, a document might be coded Sky High, document 10, project goal 5, objective B. The document should then be entered on the Sky High log sheet and be filed according to the coding information. To facilitate comparing data across sites, it may sometimes be helpful to use color-coded instruments; for example, questionnaires sent to judges might be printed on green paper, those sent to police officers on blue, etc. Occasionally, a document pertains to several goals and objectives. In this case, the original should be filed under one objective, and "dummy" sheets--sheets listing the title of the document, its code number, and file location--should be placed in the files for the other applicable goals and objectives. Use of "dummy" sheets saves duplicating expenses while allowing rapid identification of all evidence bearing on an issue.

This system of filing allows review of the progress toward any goal at any site as well as identification of unfulfilled implementation objectives that may be blocking progress toward broader goals. It is suggested that projects appoint particular staff members primary responsibility for individual sites. The assigned staff should be responsible for developing comprehensive knowledge about the program at their sites. They should review all site documents as they are collected and systematically review files in order to gain detailed knowledge about the sites and identify topics needing additional documentation. It may be useful for projects to develop, or have site personnel develop, time lines for implementation of the program. Critical points on these time lines could then be used as the points at which detailed analyses of site progress are conducted.

Because some of the data collected may be quite sensitive, document security and confidentiality must be maintained. Access to the files should be limited to those who need to work with the data. Any public use of the documents should be carefully controlled to protect the identities of both individuals and sites.

ACTIVITY 14:

ANALYZING AND REPORTING DATA:

SELECTING THE APPROPRIATE DESCRIPTIVE STATISTICS*

Introduction: A wide variety of statistical techniques can be used to effectively describe evaluation results. Care must be taken in selecting techniques because different statistics emphasize different aspects of the data and because statistics can easily be misused to imply false information. The purpose of this activity is to give participants an understanding of commonly encountered types of data and a method for choosing the appropriate descriptive statistics for each. It also gives them practice in actually presenting data.

Objectives: Participants will be able to--

1. Identify the type of scale (nominal, ordinal, or interval) used for a given set of data.
2. Describe the characteristics of each of these three scale types.
3. Choose the appropriate descriptive statistics to use when given a scale type and a specific research question.

Time: 3 hours

Materials Needed: Handouts 29-32, newsprint and marking pens, and tape

Procedure:

1. Introduce the activity by discussing the dilemma of having to deal with two conflicting requirements in presenting evaluation findings: (1) presenting data in a way that the audience will grasp in the time they are willing to give to it and (2) presenting the data accurately, without masking its subtleties and qualifications, and without the distortions which can accompany simplification and summarization of data.
2. Point out that using the appropriate statistical techniques can help resolve this dilemma. Stress that choosing the proper statistic

*This activity was developed by Robert B. Abelson.

requires care, however, because each emphasizes a different aspect of the data and because they can be easily misused to imply false information. Tell participants that this activity will help them choose the techniques to use in different situations, in order to effectively present their evaluation findings.

3. Distribute the first two pages of Handout 29, "Identifying Nominal, Ordinal, and Interval Data." Explain that the different types of data have different characteristics; you must know which type you are dealing with to choose the appropriate statistics. Make sure the participants understand the differences between the three types of scales and how to use the flowchart on the handout. Then give them a few minutes to work in groups of two or three to identify the types of data for each item on page 2 of the handout.

4. Distribute the last two pages of the handout. Discuss each item, making sure participants understand the correct answer, the reasons, and the comments.

5. Distribute Handout 30, "Common Descriptive Statistics." Explain that descriptive statistics are used to answer five general types of questions. For each general type of question, the chart shows some common statistical techniques that can be used for each of the three types of data. Note that any technique listed may also be used for any higher level scale, but not for any lower level.

6. Divide the participants into groups of four or five. Give each group a supply of newsprint and a marking pen. Tell the participants that each group will have the same task to work on for 45 minutes. Tell them not to look at what the other groups are doing, so that you will have a number of independent solutions to the problem. When the time is up, each small group will have a chance to present its solution to the entire group.

7. Distribute Handout 31, "Presentation to School Board." Give the groups 45 minutes to work on the task.

8. Select a group and have one member make a five-minute presentation on their solution. Tape any visual aids the group has constructed to the wall so they can be seen by everyone. Have as many groups report on their solutions as time allows.

9. Have the entire group discuss which techniques worked best, which not so well, and why. Discuss which contained the most information in the most understandable way. Have the participants point out any technical errors, such as using techniques inappropriate to the type of data involved, omitting titles, etc.

10. Finally, pass out Handout 32, "Some Suggested Techniques." Give the group a few minutes to look it over, and then discuss any ideas this packet contains that were not covered in the presentations. Be sure to point out that there is no single correct approach to presenting data, as long as the presentation is both comprehensible and technically correct.

IDENTIFYING NOMINAL, ORDINAL, AND INTERVAL DATA

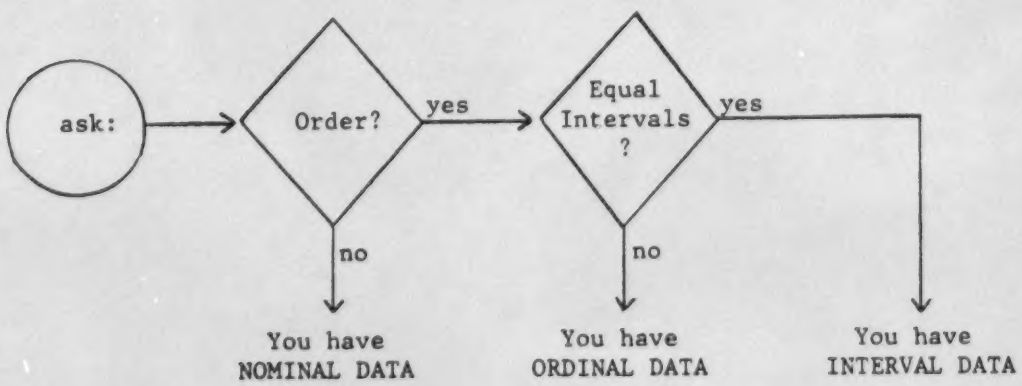
Three types of data are commonly encountered in evaluation research: nominal, ordinal, and interval. Each of these types of data has unique characteristics and requires different statistical techniques. The definitions are:

--Nominal: scales comprised of a set of independent categories with no intrinsic order. Example: ethnic group. (No arithmetic operations may be done on nominal data, even if a number is assigned to each category; these numbers simply represent names of the categories and are not "real" numbers.)

--Ordinal: scales comprised of categories that have some order. Examples: grades (A, B, C, D, and F); Likert scales. (No arithmetic operations, such as computing means, may be done on ordinal data, since these operations require equal intervals between the points on the scale. For example, the difference in knowledge between a student scoring A and a student scoring B on an essay test is not necessarily the same as the difference in knowledge between a student scoring B and a student scoring C. However, since the categories have an order, ordinal scale scores may be ranked, the median (the middle score) may be computed, and other order-dependent statistics may be used.)

--Interval: ordinal scales where the intervals between categories (i.e., points on the scale) are all equal (sometimes called "equal-interval" data). Example: age. (Arithmetic operations may be performed on this type of scale.)

The following flowchart can be used to determine which type of data you have:



Directions: Indicate whether each of the following types of data is nominal, ordinal, or interval:

_____ 1. Answers to a survey question asking for the respondent's occupation.

_____ 2. IQ scores.

_____ 3. Answers to an interview question asking whether the respondent's expectations for a workshop were met. The choices are:

(1) expectations met
(2) undecided
(3) expectations not met

_____ 4. Answers to the question in 3 above, except the choices are:

(1) expectations met
(2) had no expectations
(3) undecided
(4) expectations not met
(5) expectations not met, but had the wrong expectations
(6) other response
(7) did not respond

_____ 5. Number of times a student was absent from class during a semester.

_____ 6. Answers to a question asking whether students felt they learned more from an LRE class than from other classes. The choices are:

(1) yes
(2) no

_____ 7. Answers to a question asking students to indicate their attitude toward some issue on a 9-point scale, where 1 = strongly in favor and 9 = strongly opposed.

_____ 8. Answers to the question in 7 above, except the choices are:

(1) strongly in favor
(2) in favor
(3) undecided
(4) opposed
(5) strongly opposed

_____ 9. Data from item 7 above (9-point scale) ranked such that the student with the most favorable attitude in the class gets a rank of 1, the student with the next most favorable attitude gets a rank of 2, and so on.

_____ 10. Scores on a classroom test consisting of 25 multiple-choice items measuring knowledge of LRE material.

_____ 11. Letter grades for a course: A, B, C, D, and F.

ANSWER GUIDE

1. Nominal. The answers could be "teacher," "principal," "lawyer," etc., independent categories that have no order even if coded with numbers. The numbers are totally arbitrary names and have no real numeric meaning.

2. Interval. Some people feel that IQ scores are really ordinal, because there is no assurance that an increment of one IQ point always signifies the same increment in intelligence. However, most people feel that because of the way they are constructed, IQ tests produce interval data. This example illustrates that the line between ordinal and interval data can be hazy and open to argument.

3. Interval. This scale has only two intervals: one between the positive response and undecided, and the other between the negative response and undecided. Since "undecided" can be regarded as a kind of "zero reference point," and since the choices allow only discriminations between a positive and a negative response (but not the magnitude of the response), we can consider the size of the two intervals as equal. As with IQ scores, however, a strictly conservative approach would consider this an ordinal scale, since we cannot be absolutely sure the two intervals are exactly equal.

4. Nominal. Adding the choices indicated destroys any overall order to the categories. Furthermore, the choices cannot be arranged in any meaningful order. In fact, the scale probably no longer even has a single dimension; normally there is no reasonable way to arrange the categories of a multidimensional scale in any meaningful order.

5. Interval. The numbers represent "real" quantities; it is proper to perform all arithmetic operations on these data.

6. Interval. This example is a little tricky. One's first impression is that this is an ordinal scale. Technically, however, all dichotomies can be considered as interval data because they satisfy both criteria: (1) they have an order (one category is always more of something than the other) and (2) since they only have one interval, "all" intervals are equal.

7. Ordinal. The scale is defined so as to have an order. However, with nine categories, it is highly unlikely that the resulting eight intervals are really all equal; i.e., it is highly unlikely that the nine points are exactly evenly placed along the scale.

8. Ordinal or Interval. This one requires some judgment. As discussed in item 7, with nine categories this is most probably an ordinal scale. In item 3, however, the case was made for a three-category scale being interval. A Likert scale of five categories is therefore somewhere in between. A judgment must be made as to whether the categories are approximately equally spaced along the particular scale being worked with.

9. Interval. Another tricky one. When you rank any ordinal scale scores, you create an interval scale, because ranks represent "real" numbers. However, it becomes a scale of ranks, so that any conclusions you draw pertain to ranks, not to the original attitude scale. For example, you can compute the mean, but it is the mean rank, not necessarily the mean attitude.

10. Ordinal or Interval. Such a scale is usually considered to be interval data because the scores represent actual numbers--numbers of correct responses. However, unless the focus is on ranks, as discussed above, the real question is whether an increment of one point anywhere on the scale always represents the same increment in degree of knowledge. Therefore, a judgment is again necessary. If the test items are all approximately the same level of difficulty, the scale is more likely to be interval. But if the test consists of, for example, 24 easy items and one very difficult item, the difference between the scores of 24 and 25 clearly represents a larger difference in knowledge than that represented by the difference between the scores of 23 and 24. In that case, the scale would be ordinal.

11. Ordinal. A very frequent misuse of statistics is to compute grade-point averages by assigning 4 to A, 3 to B, etc. Simply assigning numbers to ordinal categories does not create an interval scale. The extent of the distortion introduced by performing arithmetic operations on ordinal data is determined by the extent to which the intervals between the categories are unequal. Apparently, most people feel that letter grades are close enough to interval data that the convenience of treating them as such outweighs the distortions introduced.

COMMON DESCRIPTIVE STATISTICS

Type of Question	Type of Data		
	Nominal	Ordinal	Interval
GENERAL PICTURE: What general picture of the group emerges from the data?	Pie charts Bar graphs Frequency distributions	Grouped frequency distributions	Frequency polygons Cumulative frequency graphs
CENTRAL TENDENCY: What does the "typical individual" look like?	Mode	Median	Mean
VARIABILITY: How homo- or heterogeneous is the group?	(special techniques)	Range Interquartile range	Standard deviation Variance
INDIVIDUAL POSITION: How does some single individual(s) compare to the rest of the group?	(special techniques)	Ranks Percentile ranks	Standard scores (e.g., z-scores)
RELATIONSHIPS: How do specific variables relate to each other within the group?	Contingency tables	Rank-order correlation	Coefficient of correlation

Note: Any techniques shown may also be used for any higher level scale; e.g. nominal scale techniques may be used with ordinal or interval data, but interval scale techniques may not be used with nominal or ordinal data.

PRESENTATION TO SCHOOL BOARD

The Task

You are a teacher at Grumper High School. The principal has asked you to attend a school board meeting at which a recently implemented LRE program will be discussed. You are among the few teachers in the district who infused LRE into your U.S. history class for the first time this semester. Now that the semester is over, the school board wants to know how things went.

During the discussion, you will be called upon to give a five-minute presentation of data to the board. Your task now is to prepare one or more visual aids to help you present your data.

Your Data

You have two sets of data to present. One set comes from a test consisting of five short essay questions concerning legal rights and responsibilities that you gave to your class at the end of the semester. You scored the test by grading each question as follows: 0 = wrong or no answer, 1 = partially correct, 2 = adequate answer, and 3 = excellent answer. Thus, students' scores could range from 0 to 15.

Your other set of data comes from five Likert-type items you selected from an "Attitude Toward Participatory Citizenship" inventory and also gave to your class at the end of the semester. On this attitude inventory, 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree. The five items were:

1. I can have a voice in what government does.
2. If a law were passed which I believed was unjust, I would work to have it changed.
3. I would be willing to serve on a jury.
4. Most people in government care about what people like me think.
5. I would be willing to volunteer time to help a candidate with whom I agreed.

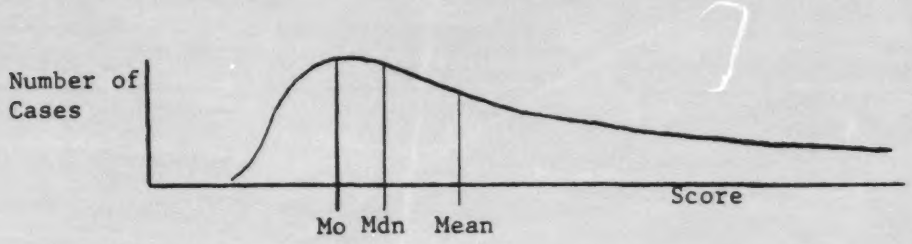
You added up the responses to give an attitude score for each student ranging from 5 to 25.

You also asked a colleague who did not infuse LRE into a similar American history class to give the same tests, so that you could have a control group. The data for both classes are shown below.

Some Hints

All tables or graphs should have a good title and provide the information necessary to interpret the data presented. All columns on a table should be titled and the axes of all graphs should be labeled.

The mode is the most frequent score. The median is the middle score (i.e., half the group scores above the median, and half scores below it). The mean is the sum of the scores divided by the number of scores. Note that in a skewed distribution, the mean is always more toward the tail of the distribution than the median, and the median is always more central than the mode (see diagram below). For this reason, these measures can give different impressions of the "typical individual."



If you combine data in a table, be sure you do not mask some important characteristics of the group. For example, if a distribution is bimodal (has two modes), don't combine the data into categories in a way that hides this bimodality.

Always report the number in your sample.

Data

Your Students:	Essay Test Score	Attitude Inventory Score
Student 1:	7	9
2:	14	5
3:	8	11
4:	8	12
5:	15	10
6:	9	20
7:	10	15
8:	11	10
9:	11	12
10:	7	8
11:	12	18
12:	13	8
13:	6	14
14:	13	9
15:	15	16
16:	12	15
17:	13	20
18:	5	7
19:	12	16
20:	14	15

Control Students:	Essay Test Score	Attitude Inventory Score
Student A:	7	17
B:	10	9
C:	11	10
D:	10	8
E:	13	6
F:	10	5
G:	9	14
H:	9	11
I:	12	10
J:	13	15
K:	8	9
L:	8	12
M:	7	9
N:	12	9
O:	11	14
P:	6	13
Q:	8	18
R:	5	7
S:	4	15
T:	10	13

SOME SUGGESTED TECHNIQUES

No single approach to analyzing and reporting data is always best. Many techniques can be used, as long as they are technically correct and comprehensible to the audience. Some suggested techniques are described below:

1. First make frequency distributions of the raw data in a form that allows you to see what you really have. (The original raw data are rarely easily understood in that form.) The example below represents the essay test data for your class.

Score	Frequency
15	2
14	2
13	3
12	3
11	2
10	1
9	1
8	2
7	2
6	1
5	1

2. Group the raw data frequency distribution in a way that allows easier interpretation. A minimum of five and a maximum of nine categories usually works out well. Of course, the size of each category should be the same, except in special situations. Below, the essay test data are grouped into six categories, each two points wide.

Score	Frequency (your class)	Frequency (control class)
I4-15	4	0
12-13	6	4
10-11	3	6
8-9	3	5
6-7	3	3
4-5	1	2

BEST COPY AVAILABLE

3. Compute any measures of central tendency, variability, etc. that you feel would be useful. In the example, we would select the median as the most accurate measure of central tendency for the essay tests because

a. The distribution for your class is skewed, so the median gives a more accurate picture of the "typical individual" than either the mode or the mean.

b. We feel safer using the median rather than the mean, since we can't be sure we have interval data.

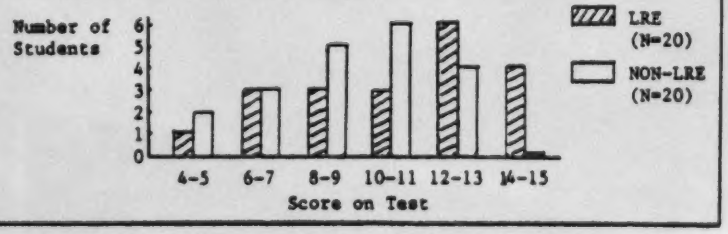
Note that it is easy to figure the median by finding the middle score on the raw data frequency distribution (not the grouped frequency distribution). In the example from the essay test data for your class, the tenth score from the bottom is 11 and the tenth score from the top is 12. We split the difference and call the median 11.5. (For large groups, there are methods for computing the median from the grouped distribution; see a statistics book.)

4. Prepare a table or graph to display the data in an attractive manner that also provides the most information in an easily understood format. Below are examples of two common alternatives:

COMPARISON OF GRUMPER H.S. LRE-INFUSED VS. NON-LRE-INFUSED AMERICAN HISTORY CLASSES: END-OF-SEMESTER SCORES ON AN ESSAY TEST ON LEGAL RIGHTS AND RESPONSIBILITIES.

Test Score	% of Students (LRE Infused Class)	% of Students (Non-LRE Infused Class)
14-15	20%	0%
12-13	30%	20%
10-11	15%	30%
8-9	15%	25%
6-7	15%	15%
4-5	5%	10%
Total N	20	20
Median	11.5	9.5

COMPARISON OF GRUMPER H.S. LRE-INFUSED VS. NON-LRE-INFUSED AMERICAN HISTORY CLASSES: END-OF-SEMESTER SCORES ON AN ESSAY TEST ON LEGAL RIGHTS AND RESPONSIBILITIES.



BIBLIOGRAPHY

Commercially Available Resources

The resources listed below could form the basis of a project director's or teacher's core personal library on program evaluation. These resources were selected for inclusion because they are practical and easy to understand.

Mager, Robert F. Preparing Instructional Objectives. Belmont, Calif.: Fearon Pitman, 1975 (2nd ed.).

Mager's little programmed book on the writing of clear, precise instructional objectives is still one of the best "how-to-do-it" guides in the field. It takes the user through the objective-development process in a straightforward, step-by-step fashion. Chapters are "Objectives," "Why We Care About Objectives," "The Qualities of Meaningful Objectives," "Identifying the Terminal Behavior," "Further Defining the Terminal Behavior," "Stating the Criterion," and "Self-test."

Morris, Lynn Lyons, Carol FitzGibbons, and Marlene Henerson. Program Evaluation Kit. Beverly Hills, Calif.: Sage, 1978.

This set of eight easy-to-read paperbacks is intended to initiate the novice into the practice of evaluation. The texts are sequentially arranged to provide important information at each step in the evaluation process. Titles are: Evaluator's Handbook, How to Deal with Goals and Objectives, How to Measure Attitudes, How to Measure Achievement, How to Calculate Statistics, and How to Present an Evaluation Report. The books can be purchased individually or as a set (at a reduced price).

Patton, Michael Quinn. Qualitative Evaluation Methods. Beverly Hills, Calif.: Sage, 1980.

Patton has written one of the finest introductions to qualitative evaluation currently available. The book provides a rationale for the approach, as well as a philosophical orientation. It also offers practical suggestions in such areas as observing, interviewing, collecting data in the field, and data analysis.

Rossi, Peter, Howard Freeman, and Sonia Wright. Evaluation: A Systematic Approach. Beverly Hills, Calif.: Sage, 1979.

This comprehensive guide to program evaluation includes chapters on the following topics: "Uses of Evaluation Research," "Program Requirements for Evaluation," "Research for Program Planning," "Monitoring Program Implementation," "A Framework for Impact Assessment," "Rigorous Methods for Impact Assessment," "Approximate Methods for Impact Assessment," "Measuring Efficiency," and "The Context of Evaluation Research."

Tuckman, Bruce Wayne. Evaluating Instructional Programs. Boston: Allyn and Bacon, 1979.

This is a general guide to designing and conducting both formative and summative evaluations of educational programs. The guide provides suggestions for each step in the evaluation process, presenting case studies of evaluations as examples.

TenBrink, Terry D. Evaluation: A Practical Guide for Teachers. New York: McGraw-Hill, 1974.

This clearly written textbook provides not only specific guidance and practice for teachers but also general consideration of the contexts and purposes of educational evaluation. The focus is primarily on student evaluation, but curriculum and instructional evaluation, components of the decision-making process, are also discussed. Evaluation is treated as information gathering for decision making, rather than as merely "testing." The three major segments of the book are "Concepts Important to an Understanding of the Evaluation Process," "Steps in the Evaluation Process," and "Procedures for Constructing or Selecting Specific Information-gathering Instruments." Examples are drawn from all subject areas.

Practical easy-to-understand sources on the use of statistics are more difficult to find. The two books listed below are unfortunately out of print. Because they are easily understood by the novice, however, they are well worth a trip to the local library. If neither is available, consult an introductory statistics text--or a statistician!

Franzblau, Abraham N. A Primer of Statistics for Non-Statisticians. New York: Harcourt, Brace, and World. 1958.

This little paperback provides an excellent, nontechnical introduction to statistics focusing on concepts and rationale, rather than formulae. Quick and easy reading.

Senders, Virginia L. Measurement and Statistics. New York: Oxford University Press, 1958.

This very readable statistics book is intended for use in an introductory college statistics course. The material is somewhat technical and comprehensive, but it is about as clearly presented and understandable as is possible.

Resources in the ERIC System

The resources below are available through the ERIC (Educational Resources Information Center) system. Each resource is identified by a six-digit accession number. Abstracts of and descriptive information about all of these resources are published in a cumulative index, Resources in Education (RIE). This information is also accessible through three major on-line computer searching systems: DIALOG, ORBIT, and BRS.

Most of these documents are available for viewing in microfiche (MF) at libraries that subscribe to the ERIC collection. Microfiche copies of these documents can also be purchased from the ERIC Document Reproduction Service (EDRS). Paper copies of some documents can also be purchased from EDRS. Information about the availability of every document listed is included at the beginning of the annotation, along with a code indicating the prices for both microfiche and paper copy. (The order form at the end of this section contains a key to the price code and other information about ordering copies from EDRS.) If a document is not available from EDRS, the source is provided.

Ball, Samuel. Evaluating Educational Programs. Princeton, N.J.: Educational Testing Service, 1979. ED 178 596. EDRS price: MF01 plus postage. PC available only from publisher.

The activities of the Educational Testing Service (ETS) in evaluating educational programs are described. Program evaluations are categorized as needs assessment, formative evaluation, or summative evaluation. Principles used by ETS researchers in evaluating programs are described for each of the phases of evaluation: (1) making goals explicit, (2) measuring program impact, (3) working in field settings, (4) analyzing the data, and (5) interpreting the results.

Cates, Debra M. Program Evaluation and the Management of Change Using the Individual as a Frame of Reference. Paper presented at the Adult Education Association Conference, 1981. ED 208 221. EDRS price: MF01/PC02 plus postage.

The Omaha Teacher Corps Project has developed a comprehensive evaluation plan involving not only concrete data but individual behavior as well. Its evaluation program consists of seven levels of evaluation: inputs, activities, participation, reaction, learning, practice change, and end result. Six exhibits illustrate the logistical matters concerned with data collection and documentation of each level. One component of the evaluation process is the Concerns-Based Adoption Model (CBAM), a model that uses the individual as its frame of reference. It views the change process within formal organizations as entailing the individual's moving through several identifiable stages of concern about the innovation and eight levels of use of the innovation. Levels of use are assessed using a validated, focused-interview process.

Curriculum Review Handbook: Social Studies. Oklahoma City: Oklahoma State Department of Education, 1981. ED 208 536. EDRS price: MF01/PC02 plus postage.

This handbook's eight sections consist primarily of open-ended questions and checklists that allow for flexibility and adaptation in reviewing, analyzing, and evaluating a school's social studies curriculum. The major section on program evaluation contains a lengthy check-

list that teachers can use to determine the presence of elements that would be included in a quality social studies program. The areas covered are program philosophy, organization and administration, instruction, materials and resources, and evaluation.

De Voss, Gary and others. A System for Documenting and Evaluating the Experiences of Pre/Inservice Teachers. Columbus, Ohio: Ohio State University, 1981. ED 211 500. EDRS price: MF01/PC02 plus postage.

Ohio State University's College of Education has created the Student Information System (SIS) as a means of receiving feedback and evaluating its teacher education programs. SIS is designed to monitor students' skill development at many stages and takes into consideration the interrelated factors that shape teachers. This document presents the reasons for creating the SIS and the system's components. The instrumentation of the SIS, including tables describing the SIS components and a cross section of a stage in professional development illustrating the components, is included.

Elementary Program Review Handbook and Secondary Program Review Handbook. Sacramento, Calif.: California State Department of Education, 1981. ED 212 080 and ED 212 081. EDRS price: MF01 plus postage for each document. PC available only from publisher.

California's review process has been designed to judge the effects of the school program on students and staff and to identify opportunities for improving the program. The elementary handbook contains three chapters: one describes the program review process, the second explains how to conduct a review and includes the criteria used to judge and improve programs, and the third describes how to report findings. The secondary handbook describes three parts of a review: the effect of instruction on students, the effect of support on instruction, and the effect of the improvement process on support and instruction. For each, the handbook provides criteria for judging quality, a guide for collecting information, and worksheets for preparing suggestions on program improvement.

Evaluation Guide. Atlanta: Georgia State Department of Education, 1979. ED 181 566. EDRS price: MF01/PC02 plus postage. PC also available from publisher.

This resource guide provides step-by-step guidance to help schools evaluate an adopted program. It offers an overview of the approaches most useful for evaluating a schoolwide or districtwide program adoption. It emphasizes that evaluation should be addressed from the first day of planning to provide data for short-term and long-term decision-making. Topics covered include evaluation purpose, goals and objectives, assessment instruments, data requirements, data collection, data analysis, monitoring, and reporting.

Gold, Robert S. and others. Evaluation Studies and Change: A Review of the Literature. 1979. ED 212 645. EDRS price: MF01 plus postage. PC not available.

This document reviews the literature related to the use of evaluation results. Discussed are analysis of evaluation results and technical methods for implementing suggestions. Twenty-one pages of selected references are provided.

Hansen, Desna Wallin. Program Evaluation--Staff/Faculty Development: Providing a Framework. 1981. ED 212 209. EDRS price: MF01/PC01 plus postage.

Basic considerations for evaluating a faculty development program are considered. The framework consists of establishing the parameters, designating the purpose, assessing the developmental stage of the program, determining general methods of evaluation, and defining the criteria for success. Determining the purpose of the program evaluation requires a considerable degree of knowledge of the programs and objectives, as well as the political and economic factors, affecting any particular program. Before deciding the method of evaluation to be used, those involved should take a close look at the stage of the development program to be evaluated. Methods of program evaluation include the historical-descriptive approach, the measurement-correlational model, quasi-experimental designs, the developmental-intensive model, the

action-research approach, illuminative evaluation, and the consultative approach.

Jones, Leon. Educational Evaluation: Service or Menace. 1979. ED 201 706. EDRS price: MF01/PC02 plus postage.

This paper analyzes educational evaluation and assesses its value to the educational process. The development of evaluation research and practice is outlined and formative and summative evaluation techniques are compared. The facets of formative evaluation examined include: (1) its nature and application, (2) how it is conducted, (3) when it should be implemented, (4) where it is conducted, and (5) who implements the process. A general analysis of evaluation with special attention to the possibilities for negative effects concludes the paper.

Program-Related Evaluation--Manual and Staff Development Package. Los Angeles: Los Angeles Unified School District, 1980. ED 210 282. EDRS price: MF01/PC04 plus postage.

This manual is designed to accompany staff development sessions in which research and evaluation personnel discuss key areas with administrators, evaluators in schools, and area office personnel. Forms and methods for assessment and reporting of pupils' progress in a local school's instructional program are illustrated. Methods of establishing an evaluation committee and the functioning of it to review program implementation, quality, outcomes for students and staff, and the match between budget and expenditures are outlined. Specific forms are reproduced, and directions for their use are included.

Raizen, Senta A. and Peter H. Rossi, eds. Program Evaluation in Education: When? How? To What Ends? Washington, D.C.: National Academy of Sciences, 1981. ED 205 614. EDRS price: MF01/PC12 plus postage. PC also available from National Academy Press.

In response to a provision of the Education Amendments of 1978 concerning evaluation practices and procedures, this report examines four aspects of evaluation in education, focusing on how funds allocated to evaluation can be spent more effectively and yield more useful results.

On this basis, recommendations are made to both Congress and the Department of Education. These are presented in an opening summary and then discussed more fully in each chapter. The first chapter is designed as an introduction to the background and scope of the report. A definition of evaluation is given in chapter 2, which also addresses congressional concern with uniform methods and measures in the context of delineating different types of evaluation and their appropriate use. Improvement of the quality of evaluation forms the substance of chapter 3. Discussion in chapter 4 centers upon the utilization and dissemination of evaluation results. The final chapter makes recommendations for improved management and organization and presents implications for this derived from preceding chapters.

Roberts, Sarah. Communicating Evaluation Results. Palo Alto, Calif.: American Institutes for Research, 1978. ED 181 345. EDRS price: MF01 plus postage. PC available only from publisher.

The goal of this module is to help users develop the skills needed to produce an effective evaluation report in terms of content, format, level of sophistication, accuracy, and organization. The module format consists of an overview, goals, objectives, outline, time schedule, glossary, readings, skill development activities, and bibliography. A Coordinator's Guide included has detailed instructions for presenting the module in a workshop setting as well as the facilitator's roles and functions, and the criteria used in assessing the participants' achievement of module objectives.

Russell, Dale and others. Developing a Workable Needs Assessment Process. Los Angeles: Los Angeles County Superintendent of Schools, 1977. ED 179 565. EDRS price: MF01/PC04 plus postage.

This training guide was developed for inservice training on implementing the concepts and practices involved in needs assessment. Fifteen steps are described: (1) determining the scope and possible outcomes of the program, (2) establishing decision rules, (3) stating goals for each component, (4) assigning priorities to the goals, (5) conceptualizing the data collection process, (6) obtaining measurement instruments,

(7) obtaining the superintendent's approval, (8) collecting, summarizing, and reporting the data, (9) setting final performance standards, (10) determining needs, (11) determining the priorities among needs, (12) determining the feasibility of the desired program, (13) identifying the possible causes of existing weaknesses, (14) developing program objectives and activities, and (15) reviewing the proposed programs. Exercises include selecting and ranking goals, selecting a needs assessment model, and questionnaire development. A bibliography is appended.

Spirer, Janet E. Assessing Experiential Learning in Career Education. Paper presented at the Annual Meeting of the American Educational Research Association, 1981. ED 199 273. EDRS price: MF01/PC01 plus postage.

Although this paper focuses on assessing experiential learning strategies in career education, many of the points discussed would also apply to other areas. The following six points should be considered before an assessment program begins: (1) assumptions, (2) goals, (3) outcomes, (4) learning environment, (5) role of assessors, and (6) focus. Two basic types of assessment are performance assessment (assessing an experience as it occurs) and outcome assessment (evaluating the result or end product of learning). The same techniques may be used for both types. Assessment techniques include direct assessment, self-assessment, work sample, simulation, and paper-and-pencil tests. Before selecting one or a combination of assessment techniques, triangulation (verification of the information obtained) and types of program outcomes should be considered. Other factors such as level of realism desired, costs, time available, and staff available must be considered when designing the assessment scheme.

Stone, James C. and Raymond A. James, eds. Qualitative Evaluation. Berkeley, Calif.: California Council on the Education of Teachers, 1981. ED 207 991. EDRS price: MF01/PC06 plus postage.

"Qualitative evaluation" is the theme of this issue of the California Journal of Teacher Education. Ralph Tyler states that evaluation is essentially descriptive and using numbers does not solve basic problems. Martha Elin Vernazza examines the issue of objectivity in

history and its implications for evaluation. John W. Ratcliffe discusses some recent paradigm shifts in scientific thought and presents some methodological guidelines for evaluation that are congruent with these shifts. Mark St. John distinguishes between seeing what is happening and one's image of what is happening. Other articles describe a variety of evaluation studies.

Talmage, Harriet and Sue Pinzur Rasher. Quantifying Qualitative Data: The Best of Both Worlds. Paper presented at the annual meeting of the American Educational Research Association, 1981. ED 204 396. EDRS price: MF01/PC01 plus postage.

An approach for merging quantitative-qualitative data in order to enlarge the evaluator's perspective and provide an enriched data base for evaluating elusive evaluation problems in school settings is described. A replicable model for conducting mini-case studies and analyzing within and across school data illustrates that quantitative and qualitative data are integrative and serve a confirmatory purpose. Both qualitative and quantitative data have inherent limitations, but integration of the two will extend the scope of the data base and generate new variables. Abandoning the view of quantitative and qualitative data as dichotomous permits the development of synthesizing methods for discerning program effects in an organized, rational, scientific manner.

Wanous, Donna S. and William A. Mehrens. Helping Teachers Use Information: The Data Box Approach. Washington, D.C.: National Council on Measurement in Education, 1981. ED 212 653. EDRS price: MF01/PC01 plus postage. PC also available from publisher.

Describing the findings and insights gained from a two-year research and development project, this document focuses on the current measurement needs of teachers and the instructional processes for meeting those needs. The article is divided into four segments: (1) a description of the literature in the field of educational measurement that guided the development of the project, (2) a description of the project, its goals, and components, (3) a discussion of the results from the field trials, and (4) a set of reflections about recommendations for the professional

development of teachers in the content area of educational measurement. The "Data Box" is introduced and described as an instructional package having teachers investigate the use of assessment data in a variety of instructional decision-making situations. Major measurement concepts teachers need to know, and a thorough evaluation plan, are given.

Williams, Paul L. and Jerry R. Moore, eds. Criterion-Referenced Testing for the Social Studies. Washington, D.C.: National Council for the Social Studies, 1980. ED 196 784. EDRS price: MF01 plus postage. PC available only from publisher.

This bulletin discusses current issues and practices in social studies assessment, ways to improve testing, and methodologies to strengthen the validity, reliability, and value of tests. The primary purpose of the bulletin is to bring the social studies profession up to date about the issues and strategies involving criterion-referenced testing. The bulletin's six chapters examine such topics as inadequate treatment of assessment issues in social studies, characteristics of criterion-referenced tests and their applicability, the National Assessment, and procedures for ensuring psychometric integrity for criterion-referenced tests.

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APPENDIX A

SAMPLE AGENDAS FOR EVALUATION WORKSHOPS

As you begin planning your use of the activities presented in this handbook, you should keep two questions in mind: (1) What is your major evaluation goal? and (2) Who will be responsible for each step in the evaluation process? For example, your goal may be to evaluate your program, either for the purpose of improving the program or in order to determine the program's impact. Individuals responsible for various steps in the evaluation procedure may include teachers, administrators, and project staff. On the other hand, your goal may be to evaluate students. Student evaluation may have a number of purposes--to diagnose student aptitudes and skills, to check student progress, to compare student knowledge and skills against a norm or against their knowledge and skills prior to enrollment in the LRE class, or to determine whether the materials, content, and teaching strategies selected are achieving the desired student learning. The evaluators in this case might be all the teachers involved in the LRE program.

To assist you in thinking about how you might use the activities provided in the handbook, we have developed three hypothetical situations and have designed a workshop format to accompany each. These formats illustrate how you can analyze your own situation and design an appropriate workshop agenda.

Situation 1

You are the social studies coordinator in a medium-sized school district (3 high schools, 14 junior highs, and 28 elementary schools). During the first semester of the past school year, you chaired a curriculum committee of seven teachers and two building administrators, which designed a law-related education program for grades 8 and 9. The committee selected ten important concepts (e.g., justice, responsibility, privacy) and developed a two- to five-day lesson to accompany each concept. They then wrote a curriculum guide detailing how these concepts should be taught within the context of the eighth- and ninth-grade social studies curricula. A list of supplementary materials for teaching these concepts is included as an appendix to the guide. The guide was distrib-

uted to all eighth- and ninth-grade teachers for use during the second semester.

The committee would now like to know whether teachers are using the guide and, if so, how well they feel the program is going. Thus, your goal is to evaluate the extent of program implementation and the success of the program once implemented. You may want to do some student testing to find out if instructional goals are being achieved, but such testing will be optional at this point.

The committee members, who are relatively inexperienced in the area, will share the responsibility for conducting the evaluation. The committee members can devote one day to receiving training in evaluation.

Before you begin planning the workshop, you read pages 3-19 of the handbook, "A Model for Evaluating LRE Projects," and determine that the committee members should understand how to establish goals and objectives, should have some knowledge about a variety of data-collection techniques, should know how to conduct interviews with participating teachers, and should understand what to do with the data once collected. Based on those priorities, you design the workshop format shown below.

WORKSHOP AGENDA: SITUATION 1

Activity Number	Activity Title	Purpose of Activity	Time Required: Workshop	Time Required: Related Evaluation Planning*
3 and 4	Goals for LRE and Stating LRE Objectives	To learn whether your program goals and objectives meet the specified criteria. You may have to rewrite some of them, the first step in modifying the new program.	2 hours	2-4 hours
6 and 7	Evaluation Techniques and Law-Related Education Questions and A Variety of Evaluation Techniques	To identify the advantages and disadvantages of various qualitative and quantitative evaluation techniques and to choose those which will be most appropriate for your specific needs.	2 hours	3-4 hours

Activity Number	Activity Title	Purpose of Activity	Time Required: Workshop	Time Required: Related Evaluation Planning*
11	Using Interviews to Collect Student and Teacher Data	To learn the techniques of interviewing and to practice conducting an interview.	3 hours	1-2 hours
13	Collecting Data and Organizing Files	To establish a process for collecting data and organizing files.	30 minutes	

*Does not include time for conducting teacher interviews and writing a report.

Situation 2

Five 11th-grade teachers in your district have been teaching a curriculum entitled "Law: Teen-age Dilemmas" for the past three years. The course was developed by a few teachers based on their perceptions of student needs and community desires. The principal thinks the course should be dropped next year, even though enrollment is high. The teachers have come to you, the evaluation consultant for the district, for help in demonstrating to the principal how ignorant 10th-graders are of the law and how badly they need such a course. The teachers distrust standardized tests and want to develop their own instrumentation. They are willing to spend one evening a week during January and February planning the evaluation. You select the series of activities shown below for use with the teachers.

WORKSHOP AGENDA: SITUATION 2

Activity Number	Activity Title	Purpose of Activity	Time Required: Workshop	Time Required: Related Evaluation Planning
6	Evaluation Techniques and Law-Related Education Questions	To stimulate teachers to think about the most appropriate techniques for use in testing student knowledge.	1 hour	--
7	Indicators and Techniques	To provide more in-depth information about the various evaluation techniques and the relative advantages and disadvantages of each.	1 hour	--

Activity Number	Activity Title	Purpose of Activity	Time Required: Workshop	Time Required: Related Evaluation Planning
9, 10, 11, and 12	Using Likert Scales to Evaluate Student Attitudes	To learn how to develop and administer four types of instruments: Likert scales, multiple-choice tests, interviews, and observation formats. (Depending on the techniques selected by the teachers, you may be able to skip one or more of these activities.)	3 hours	6-8 hours
	Using Multiple-Choice Tests to Evaluate Student Learning		2 hours	6-8 hours
	Using Interviews to Collect Teacher and Student Data		2 hours	4-6 hours
	Using Observations to Evaluate Role Plays		1 hour	4-6 hours
13	Collecting Data and Organizing Files	To establish a process for organizing and storing data. (If you have an ongoing process, you may want to skip this step.)	15 minutes	
14	Analyzing and Reporting Data: Selecting the Appropriate Descriptive Statistics	To learn how to design a report for the principal. Covered will be what type of data to report in what way to accomplish a particular goal--in this case, convincing the principal to continue LRE.	3 hours	8-12 hours

Situation 3

You are the head of a curriculum committee that is just beginning its work. You want to be sure that the program your committee develops has enough detail so that it can be evaluated when the time comes. After talking with your school district's evaluator, you have decided that you will take your committee one step further and will include suggested indicators of success with your program goals and objectives. The evaluation training outlined below will be conducted as part of the committee's regular work.

WORKSHOP AGENDA: SITUATION 3

Activity Number	Activity Title	Purpose of Activity	Time Required Workshop	Time Required Related Evaluation Planning
2	The Evaluation Process in LRE	To learn that curriculum development is part of a larger process which includes evaluation.	30 minutes	
3	Goals for LRE	To learn the appropriate criteria for writing goals which can be evaluated.	1 hour	
4	Stating LRE Objectives	To understand the difference between goals and objectives and to learn how to write acceptable LRE objectives.	1 hour	
5	Organizing and Refining LRE Goals and Objectives	To write goals and objectives for the curriculum.	2 hours	
8	Indicators and Techniques	To list indicators of achievement for each of the previously developed goals and objectives.	2-3 hours	

APPENDIX B

PROJECT LIST

The projects listed below have developed instrumentation for use in evaluating LRE programs. The projects are listed in alphabetical order by state. Each project's name and address are given along with a list of the types of instruments available. The types of instruments are coded according to the following key:

INSTRUMENTS FOR EVALUATING CLASSROOM INSTRUCTION/IMPACT ON YOUTH

1--paper-and-pencil tests of student knowledge/skills

2--paper-and-pencil surveys of student attitudes/behaviors

3--student interviews

4--teacher interviews

5--teacher questionnaires

6--classroom observation formats

INSTRUMENTS FOR EVALUATING TRAINING:

7--paper-and-pencil tests of trainee knowledge/skills

8--paper-and-pencil surveys of trainee attitudes

9--trainee interviews

10--trainer interviews

11--training observation formats

OTHER INSTRUMENTS

12--surveys/questionnaires

13--interviews

14--other

All of the projects have agreed to make single copies of their instruments available to projects or programs having similar evaluation needs. An asterisk next to a project's name indicates that a charge for copying will be made.

This list is by no means exhaustive. There are literally hundreds of LRE projects active in the United States today. A nearly complete listing is provided in ABA's Directory of Law-Related Education Projects. Those seeking particular kinds of evaluation instruments may want to consult the Directory's project descriptions to locate projects with objectives similar to their own. In fact, the Directory may also be useful in determining whether instruments from the projects listed below

would be useful to another project or program. The Directory's fourth edition (1982) is available for $4.95 from ABA, 1155 E. 60th Street, Chicago, IL 60637.

California

Curriculum Strategies for Delinquency Prevention
ATTN: Norma Wright
Santa Clara County Office of Education
100 Skyport Drive
San Jose, CA 95115
Instruments: 2 (grade 12)

Law in a Free Society/Center for Civic Education
5115 Douglas Fir Drive, Suite 1
Calabasas, CA 91302
Instruments: 4, 5, 6, 8, 9

Law-Related Education Curriculum--Long Beach Unified School Dist.
701 Locust Avenue
Long Beach, CA 90813
Instruments: 1 (junior/senior high), 5, 12 (students)

Youth Action Center for Positive Change
439 W. Compton Blvd.
Compton, CA 90220
Instruments: 1, 2, 3, 4, 5, 7, 8, 9, 10; school and nonschool youth are covered

Colorado

*Law-Related Education Evaluation Project
Box 3578
Boulder, CO 80303
Instruments: 1 (grades 5, 7-12), 2 (grades 5, 7-12), 4, 5, 6, 7, 8, 9, 10, 11, 12 (law school deans, community resource persons, school administrators), 13 (school administrators, law students, community resource persons); school and nonschool youth are covered

District of Columbia

*National Street Law Institute
605 G Street, N.W.
Washington, DC 20011
Instruments: 1 (grades 10-12)

Georgia

*Georgia Center for Citizenship and Law-Related Education
Georgia State University
Box 604
University Plaza
Atlanta, GA 30303
Instruments: 5, 8, 9, 11

Improving Citizenship Education
ATTN: Helen W. Richardson
Fulton County School System
786 Cleveland Avenue, S.W.
Atlanta, GA 30315
Instruments: 1 (grades 1-12), 2 (grades 1-12)

Illinois

American Bar Association
Special Committee on Youth Education for Citizenship
1155 E. 60th Street
Chicago, IL 60637
Instruments: 8, 12 (secondary teachers)

Constitutional Rights Foundation/Chicago
122 S. Michigan, Suite 1854
Chicago, IL 60603
Instruments: 1 (grades 9-12), 2 (grades 9-12), 3 (grades 9-12)

Massachusetts

Courts and the Classroom
District Court Department of the Trial Court of Massachusetts
209 Essex Street
Salem, MA 01970
Instruments: 8, 12 (court personnel)

Michigan

School Justice Project
Oakland Schools
2100 Pontiac Lake Road
Pontiac, MI 48054
Instruments: 1, 2

Missouri

*Law and Education Project
4130 E. Lexington
St. Louis, MO 63115
Instruments: 1 (grades 5-6)

*Legal Rights and Responsibilities in a Free Society
ATTN: Carl C. Fehrle
309 Education Building
University of Missouri
Columbia, MO 65211
Instruments: 5, 8

Rights and Responsibilities of Citizenship in a Free Society
Missouri Bar
Box 119
Jefferson City, MO 65102
Instruments: 1 (high school), 7

New Jersey

*New Jersey Law-Related Education Project
Institute for Political and Legal Education
207 Delsea Drive
RD 4, Box 209
Sewell, NJ 08080
Instruments: 1 (grades 9-12), 2 (grades 9-12), 3, 4, 5, 6, 9, 12 (potential program adopters)

West Orange Law Education Project
22 Municipal Plaza
West Orange, NJ 07052
Instruments: 2 (grades K-9), 8

Oregon

Oregon Law-Related Education Project
220 SE 102nd
Portland, OR 97216
Instruments: 1, 7, 8, 12 (teachers)

Pennsylvania

*Community Involvement for Responsible Citizenship
Two Allegheny Center, Suite 1300
Pittsburgh, PA 15212
Instruments: 1 (grades 1-8), 2 (grades 1-8), 4, 5

Justice Education Teaching Strategies
Pennsylvania Department of Education
333 Market Street
Harrisburg, PA 17108
Instruments: 1 (grades K-6), 4, 13 (parents, school administrators)

South Carolina

Ways of the Law
2712 Millwood Avenue
Columbia, SC 29250
Instruments: 1 (grades 9-12), 2 (grades 9-12)

Tennessee

*Tennessee LRE
Peabody Center for Economic and Social Studies Education
Vanderbilt University
Box 320
Nashville, TN 37203
Instruments: 6, 8, 9

Vermont

Law-Related Education Project
Department of Education
120 State Street
Montpelier, VT 05602
Instruments: 1, 5, 7, 12

Virginia

Virginia Institute for Law and Citizenship Studies
School of Education
Virginia Commonwealth University
1015 W. Main Street
Richmond, VA 23284
Instruments: 1 (grades 10-12), 2 (grades 10-12), 7, 8